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**In the Supreme Court of the United States**

**OCTOBER TERM, 1976**

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**NO. 76-7541**

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**THE B. F. GOODRICH COMPANY, ET AL.,**  
*Petitioners,*

**v.**

**DEPARTMENT OF TRANSPORTATION, ET AL.,**  
*Respondents.*

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**PETITION FOR A WRIT OF CERTIORARI  
TO THE UNITED STATES COURT OF APPEALS  
FOR THE SIXTH CIRCUIT**

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The petitioners, eight domestic tire manufacturers,<sup>1</sup> respectfully pray that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Sixth Circuit entered in this proceeding.

**OPINIONS BELOW**

The opinion of the Court of Appeals, not yet reported, appears in Appendix A hereto. The order of the Court of Appeals modifying one sentence of the opinion appears

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<sup>1</sup>The petitioners are The B. F. Goodrich Company, The Goodyear Tire & Rubber Company, Cooper Tire & Rubber Company, The General Tire & Rubber Company, The Firestone Tire & Rubber Company, The Mansfield Tire & Rubber Company, The Armstrong Rubber Company, and Uniroyal, Inc. The respondents are the Department of Transportation, William T. Coleman, Jr., the National Highway Traffic Safety Administration, and its Administrator, now John W. Snow.

in Appendix B hereto. The order of the Court of Appeals denying petitioners' request for rehearing and clarification appears in Appendix C hereto. On November 3, 1976 the Court of Appeals entered an order staying the effective date of the judgment for thirty days, to permit petitioners' application to this Court for a writ of certiorari. See Appendix D.

### JURISDICTION

The judgment of the Court of Appeals for the Sixth Circuit was entered on September 2, 1976. A timely petition for rehearing and clarification was denied on October 8, 1976, and this petition was filed within 90 days of that date. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1), and 15 U.S.C. § 1394.

### QUESTIONS PRESENTED

(1) Whether a federal administrative agency, in the exercise of its rulemaking power pursuant to legislation incorporating the rulemaking provisions of the Administrative Procedure Act, 5 U.S.C. § 553, and requiring judicial review of agency action on the basis of a record, may withhold from that record and from comment by affected persons during the rulemaking process technical information forming the basis of a regulation, and then submit such information, together with supporting affidavits of agency personnel, to the reviewing court as part of the record forming the basis of the regulation?

(2) Whether Section 103(a) of the National Traffic and Motor Vehicle Safety Act, 15 U.S.C. § 1392(a), which requires that all standards issued under the Act "shall be practicable . . . and shall be stated in objective terms," is satisfied by standards incorporated in a regulation which, because of uncontrolled variation in prescribed test procedures, permits the agency responsible for enforcement of the regulation to take such variation into account in some unspecified way in compliance testing?

### STATUTORY PROVISIONS INVOLVED

The statutory provisions involved, consisting of pertinent provisions of the Administrative Procedure Act, 5 U.S.C. § 553, and the National Traffic and Motor Vehicle Safety Act, 15 U.S.C. §§ 1392, 1394, 1423, are set forth in Appendix E.

### STATEMENT OF THE CASE

#### A. The Regulation

This case comes to this Court from the United States Court of Appeals for the Sixth Circuit where petitioners,<sup>2</sup> pursuant to Section 105 of the National Traffic and Motor Vehicle Safety Act ("Safety Act"), 15 U.S.C. § 1394, sought judicial review of the validity of a regulation (the "Regulation"), issued as of May 20, 1975 by the National Highway Traffic Safety Administration ("NHTSA"), establishing uniform tire quality grading standards for pneumatic passenger car tires. 49 C.F.R. § 575.104.<sup>3</sup> The Regulation requires that all passenger car tires sold in the United States, some 200 million annually, be graded for three performance properties, treadwear, traction and temperature resistance. Extensive test procedures are prescribed for such grading, and any manufacturer whose tires do not meet the assigned grade upon compliance testing by the

<sup>2</sup>Six of petitioners filed a joint petition for review in the Sixth Circuit on May 21, 1975. The Armstrong Rubber Company and Uniroyal, Inc. filed another joint petition on June 2, 1975 in the Second Circuit for review of the same Regulation. Pursuant to 28 U.S.C. § 2112, the latter case was transferred to the Sixth Circuit, where the cases were consolidated.

<sup>3</sup>The Regulation, issued as of May 20, 1975, and amendments issued July 2, 1975, will be referred to collectively herein as the "Regulation" and appear in Appendix F hereto. References will also be made in the petition to the Joint Appendix (Jt. App.) filed in the Sixth Circuit Court of Appeals, and to a Supplemental Appendix (Supp. App.) filed by the NHTSA in that court, both of which petitioners will request be certified to this Court upon filing of the petition.

NHTSA may, according to the agency, be liable under Section 109(a) of the Act, 15 U.S.C. § 1398, for substantial civil penalties amounting to as much as \$800,000 for any related series of violations.

The Regulation, which further requires that the grades assigned tires must be publicly disseminated in a variety of ways, will radically impact the manufacture and sale of passenger car tires in this country, with estimates of record of the cost to the domestic tire industry of implementing the Regulation ranging from \$42,000,000 to \$150,000,000 annually. The long delay in promulgation of the Regulation, which weighed so heavily in the decision of the court below, was found by the Comptroller General of the United States, reporting to the Congress in 1975, to be "attributable to technical difficulties in developing acceptable tire testing procedures and the Safety Administration's inability to provide effective leadership and to resolve internal disagreements." (V Jt. App. 1392.)

The Regulation was issued by the NHTSA under authority delegated to the NHTSA by the Secretary of Transportation, 49 C.F.R. § 1.51, pursuant to Section 203 of the Safety Act, 15 U.S.C. § 1423, which provides that, in order to assist the consumer to make "an informed choice" in the purchase of tires, "the Secretary shall, through standards established under subchapter I of this chapter," prescribe "a uniform quality grading system for motor vehicle tires." Under Section 103(b) of the Act, 15 U.S.C. § 1392(b), all standards promulgated by the agency are to be formulated pursuant to the rulemaking provisions of the Administrative Procedure Act, 5 U.S.C. § 553. Judicial review of the agency's action is made available under Section 105 of the Safety Act, 15 U.S.C. § 1394, which expressly provides that such review be made on the basis of a "record of the proceedings upon which the Secretary based his order."

#### B. Proceedings in the Court Below

In the Sixth Circuit, petitioners challenged the NHTSA's right under Section 4(c) of the Administrative

Procedure Act, 5 U.S.C. § 553(c), to withhold extensive technical data and test reports from the rulemaking record until after the period for comment had closed, and the agency's further supplementation of that record with affidavits and technical papers submitted in the first instance to the Sixth Circuit Court of Appeals on review of the Regulation. The refusal on the part of the NHTSA to provide all affected parties with the opportunity to comment on this material resulted in the issuance of a Regulation which petitioners further maintained did not comply with Section 103 of the Safety Act, 15 U.S.C. § 1392, because of uncontrolled variations in the prescribed test procedures, variations which the NHTSA was required to acknowledge would have to be taken into account in some subjective fashion in the enforcement of the Regulation. (App. F p. 8.)

The Sixth Circuit, acting contrary to the decision of the Court of Appeals for the District of Columbia in *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 402 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974), held that the materials submitted by agencies in support of regulations under judicial review do not have to be limited to those materials disclosed for public comment during the rulemaking process. The court below also refused to condemn the practice of supplementing the administrative record after promulgation of the regulation, or the further practice, also followed by the NHTSA here, of submitting affidavits and other critical technical materials in support of a regulation directly to a reviewing court in the first instance. Instead, the Sixth Circuit, applying a novel rule which purported to distinguish between undefined "background information" and "basic data upon which the agency relied," held that the Administrative Procedure Act permitted the procedures followed here, saying that the "basic data" used by the agency had been made available for comment during the rulemaking proceedings. (App. A p. 10.). The Sixth Circuit, however, found it necessary to rely upon the so-called "background information" to sustain those portions of the Regulation which it upheld. (See p. 12, *Infra*.).

With respect to the petitioners' contention that the Regulation did not satisfy the Safety Act's requirements of objectivity and practicability, 15 U.S.C. § 1392, the Sixth Circuit held that the test procedures prescribed by the Regulation were "reasonably fair and reasonably reliable." The court below so ruled despite the agency's admission in the preamble to the Regulation that uncontrolled variation in these procedures would have to be taken into account by the agency in enforcement testing. Indeed, the Sixth Circuit's construction of the Safety Act permitted variation in the Regulation's test procedures which actually exceeded the increments between the Regulation's treadwear grades, almost equaled the increments between the Regulation's traction grades and, therefore, made it impossible to obtain identical test results under even identical test conditions. With the exception of two specific provisions, one dealing with consumer information, and the other relating to the selection of course monitoring tires for treadwear testing, the Sixth Circuit upheld the Regulation.

#### REASONS FOR GRANTING THE WRIT

**(1) The Decision of the Court Below Constitutes a Radical Departure from Principles Established by This Court for Review of Administrative Action, and Is in Conflict with a Decision of the United States Court of Appeals for the District of Columbia Circuit in an Area Which Requires Consideration and Decision by This Court.**

Over the last decade, administrative rulemaking has become one of the most pervasive forms of government regulation in this country. Davis, *Administrative Law of the Seventies* 167-183 (1976); Wright, *The Courts and the Rulemaking Process: The Limits of Judicial Review*, 59 Cornell L. Rev. 375 (1974). The proliferation of administrative regulations, particularly those involving complex technology, has presented reviewing courts with an increasingly difficult task, since the legal validity of the regulations will often depend to a very great extent upon technical data generated during the rule-

making process. If reviewing courts are to perform in an expeditious and meaningful manner the task which Congress imposes upon them, and if affected persons are to be accorded the due process essential to the validity of any regulation emanating from the rulemaking process, the frequently appearing interplay between the Administrative Procedure Act, 5 U.S.C. § 553, and authorizing legislation for administrative regulations must be dealt with in a manner which will insure the preparation of an adequate record for judicial review.

In a decision which will have tremendous repercussions on the informal rulemaking process, the court below has established a new rule, contrary to that adopted by the Court of Appeals for the District of Columbia in *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 402 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974), which permits agencies to supplement the rulemaking record in areas of critical importance long after the period for public comment has terminated and even after promulgation of the resulting regulations. Unless reviewed and corrected by this Court, the rule adopted below will allow agencies unfettered discretion in manipulating the basis for an administrative regulation, and will certainly render meaningless the rights of interested citizens under the Administrative Procedure Act, 5 U.S.C. § 553(c), to comment on proposed regulations.

The informal rulemaking process forming the basis of this Regulation began in 1971, and after prolonged delay attributed by the Comptroller General (V Jt. App. 1392) to the NHTSA's failure to prescribe reliable test procedures in several completely different notices of proposed rulemaking, the Regulation was finally issued on May 20, 1975. After the period for public comment expired, the agency began to supplement the record with a variety of materials previously withheld from public scrutiny. These materials included, *inter alia*, NHTSA technical notes setting forth data generated in the course of experi-

ments undertaken by the agency for the purpose of fashioning this very Regulation (V Jt. App. 1517, 1527, 1627); documents containing calculations purporting to quadruple the capacity of the only course available for treadwear testing, which were relied upon by the agency to defend the previously unsupported lead time provisions of the Regulation (V Jt. App. 1624); cost estimates, obviously not factored into the decision-making process, but relied upon by the agency in the Sixth Circuit to demonstrate the practicality of the Regulation in light of its projected cost (V Jt. App. 1597, 1622); and scores of additional technical papers, many of which were placed in the record after promulgation of the final Regulation, some as late as five weeks after petitioners had filed their appeal to the Sixth Circuit.<sup>4</sup>

The NHTSA's attempts to supplement the record were not limited merely to placing documents in the rulemaking record after the close of the public comment period. After this action was filed with the Sixth Circuit, the NHTSA began a new phase of supplementation by placing technical documents and affidavits before the Court which had never been placed in the administrative record at any time. Thus, the agency filed with the Sixth Circuit a 121-page document styled "Supplemental Appendix" containing some 51 different documents which had not been included in the joint appendix originally filed with the Sixth Circuit. Included in this material were numer-

<sup>4</sup>Matters such as capacity and lead time had no prior support in the record, the agency relying entirely on statements in subsequent reports not addressed to these matters. Of the items which the agency placed in the General Reference section of the public record, items numbered GR-53 through GR-80 in the Joint Appendix filed in the Sixth Circuit were placed in the record either on the very day the Regulation issued or at a subsequent date. Items numbered GR-47 through GR-52 were placed in the record after the period for comment had ended, but before the final Regulation issued. (See I Jt. App. 77-81 for a list of all items placed in the record after termination of the comment period.)

ous documents which had never been made part of the agency record during rulemaking, in the form of various technical papers (Supp. App. 21, 30, 36, 39, 41); six different affidavits of agency technical personnel advancing technical arguments and bases, not otherwise established in this record, for the Regulation (Supp. App. 43, 68, 83, 89, 110, and 116); and internal agency memoranda which had been generated a full year before the Regulation had issued (Supp. App. 104, 105, and 107).

Finally, after being granted permission by the Sixth Circuit to file a rebuttal to petitioners' reply brief, the NHTSA attached additional non-record materials to its rebuttal brief, including a critical technical paper concerning the correlation of the Regulation's temperature-resistance test procedure with the road performance of tires. (See Resp. Memorandum in Answer to Petitioners' Reply Brief p. 32 and App. p. 11 thereto.) Although this paper had been prepared several years before the Regulation issued, it had never been made part of the agency record, despite repeated comments by petitioners and other interested parties, such as the Center for Automotive Safety, concerning the lack of correlation of the proposed test procedure.

The decision of the Sixth Circuit here is in direct conflict with that of the Court of Appeals for the District of Columbia in *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 402 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974), where the D.C. Circuit remanded a regulation of the Environmental Protection Agency, finding "a critical defect in the decision-making process in arriving at the standard under review in the initial inability of petitioners to obtain—in timely fashion—the test results and procedures" which formed "a partial basis" for an emission control standard. (*Id.* at 392.) Rejecting the EPA's contention, based upon the same reasoning as that employed here by the Sixth Circuit, that reference to the test results, but

not the supporting data, in a document which was made a part of the informal rulemaking record provided sufficient notice and opportunity for comment to petitioners under Section 4(c) of the Administrative Procedure Act, 5 U.S.C. § 553(c), the D.C. Circuit said:

"It is not consonant with the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, [to a] critical degree, is known only to the agency." (*Id.* at 393.)

Addressing the question as to whether the agency could rely on technical papers not previously made part of the rulemaking record, the D.C. Circuit went on to say:

"The same procedure is contemplated here as for the test data not submitted to the manufacturers prior to promulgation of the rule, that there be opportunity for comment, and an explanation presenting the EPA position on any challenge." (*Id.* at 400.)

The Sixth Circuit's approval of the use of technical affidavits of agency personnel to explain away critical deficiencies in this Regulation also represents a significant departure from principles of judicial review of other forms of administrative action established by this Court and heretofore uniformly followed by the lower federal courts. In *Camp v. Pitts*, 411 U.S. 138, 142 (1973), this Court held that the "focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court." Having failed to make those findings essential to the validity of this Regulation when it should have, this agency should not have been permitted to supply those findings to the reviewing court by "*post hoc* rationalizations" in affidavits "which have traditionally been found to be an inadequate basis for review" of administrative action. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 419 (1971). See also *SEC v. Chenery Corp.*, 318 U.S. 80, 87 (1943); *Dry Color Manufacturers' Ass'n v. Department of Labor*, 486 F.2d 98, 104, 108 (3d Cir. 1973).

The principle enunciated by this Court in *Pitts* and *Overton Park* has been applied to judicial review of administrative rulemaking by the D.C. Circuit, which termed it a "well settled rule that litigation affidavits are an unacceptable basis for appellate review of agency decision-making." *Rodway v. United States Department of Agriculture*, 514 F.2d 809, 816 (D.C. Cir. 1975). In the *Rodway* case, the court rejected efforts by the Department of Agriculture, through affidavits presented in the reviewing court for the first time, to supply a justification for the adoption of allotment regulations. Such explanations were criticized by the court not only for their lack of credibility caused by presentation after-the-fact, but even more importantly because they precluded comment from interested parties. Indeed, the court found that the absence of comments prevented proper judicial review of the regulation, saying that litigation affidavits were "unacceptable substitutes for a contemporaneous basis and purpose statement and . . . do not provide a 'whole record' to review." *Id.* at 817.

In approving these procedures followed by the agency in making and submitting the record underlying this Regulation, the Sixth Circuit has fashioned a new rule of administrative law pursuant to which an agency may withhold from its public record during the rulemaking process materials which the agency later submits to a reviewing court in defense of its regulation, so long as the materials fall into an undefined category called "background material," and so long as interested parties have had the opportunity before the agency to comment upon materials falling into a different undefined category called "basic data." (App. A p. 10.) This new rule advanced by the Sixth Circuit, based upon a vague distinction between "background information" and "basic data," is unworkable, contrary to the informal rulemaking provisions of the Administrative Procedure Act, 5 U.S.C. § 553(c), and negates the requirement, set forth in Section 105 of the

Safety Act, 15 U.S.C. § 1394, that judicial review of regulations of this kind be on the basis of a "record of the proceedings."

The Sixth Circuit rule is unworkable because it fails to establish any clear standards as to what an agency must disclose for public comment during the rulemaking process. The question presented here, therefore, cannot be dismissed from consideration by this Court as one depending upon a factual determination as to what constitutes "basic" or "background" data. This agency deemed it necessary to adduce supplementary evidence in support of this Regulation, and the Sixth Circuit relied on such evidence in upholding the Regulation.<sup>5</sup> Review by this Court is required not for the purpose of examining the lower court's characterization of the supplementary record as either "background" or "basic" data, but, rather, for the purpose of determining whether a rule based upon such a distinction has any place in the proper scheme for judicial review of administrative rulemaking. The unexplained distinction between "background" and "basic" data is so vague and flexible as to provide virtually no meaningful check upon agencies with respect to their fashioning of a record, and no real guide for courts reviewing agency rulemaking.

The Sixth Circuit rule is unfair and contrary to Section 4(c) of the Administrative Procedure Act, 5 U.S.C.

<sup>5</sup>The reliance of both the NHTSA and the reviewing court on such supplementary data and materials is amply demonstrated. For example, the Sixth Circuit expressly relied upon the affidavits of agency personnel filed with the reviewing court in affirming the lead-time provisions of the Regulation. (App. A pp. 21, 23.) In addition, in assessing the cost of the Regulation, for purposes of determining whether the Regulation was "practicable," within the meaning of Sections 103(a) and (f) of the Safety Act, 15 U.S.C. §§ 1392(a), (f), the Sixth Circuit cited and attached to its opinion excerpts from a document docketed by the agency the day the Regulation issued and amended more than a month after petitioners had filed their appeal to the Sixth Circuit. (App. A pp. 14, 44-49.)

§ 553(c), because it renders interested parties' right of comment during rulemaking meaningless. The rule allows agencies to defend regulations under review by pointing to technical data and other supporting materials which may stand unrebutted on the agency record only because the agency has withheld such data from public scrutiny and comment. "Obviously a prerequisite to the ability to make meaningful comment is to know the basis upon which the rule is proposed." *Portland Cement Ass'n v. Ruckelshaus*, *supra* at 393, n. 67. Indeed, by sanctioning the use by an agency of materials submitted directly to the reviewing court even after an appeal has been filed, the Sixth Circuit has fashioned a rule which will prevent interested parties from even being able intelligently to weigh the merits of seeking judicial review. Such parties may never know, until after judicial review is well underway, just what the agency is contending is the full record upon which the agency has based the regulation and upon which the agency will rely in asking a court to sustain the regulation.

The fair and workable rule which ought to be employed is that adopted by the D.C. Circuit in *Portland Cement Ass'n v. Ruckelshaus*, *supra*, which simply measures the duty of an agency to disclose materials for comment during rulemaking by what that agency feels compelled to submit later to a court in defense of the regulation if that regulation is challenged upon judicial review. If the agency has deemed material to be important enough to its regulation to submit to a reviewing court, then, irrespective of whether that material is claimed to be "basic data" or "background information," it should also have been disclosed by the agency on its own record during the rulemaking process for comment by interested parties. In short, the agency's duty of disclosure for comment ought to be coextensive with what the agency itself deems important enough to place before a reviewing court in defense of the regulation.

This interpretation of the procedural requirements for informal rulemaking under Section 4(c) of the Administrative Procedure Act, 5 U.S.C. § 553(c), finds additional support in a recent article by Judge J. Skelly Wright, *The Courts and the Rulemaking Process: The Limits of Judicial Review*, 59 Cornell L. Rev. 375, 381 (1974):

"It is the common spirit of such decisions [interpreting the notice requirement of § 553] that the agency must make continuous disclosure of the facts and assumptions on which it intends to rely in promulgating its rule. \*\*\*

*Section 553 contemplates that rules will be made through a genuine dialogue between agency experts and concerned members of the public. In policing the three-step procedure, the reviewing court must satisfy itself that the requisite dialogue occurred and that it was not a sham.*" [Emphasis added.]

Although it has been suggested that agency decisions in informal rulemaking can be guided by the agency's "accumulated expertise," such a doctrine does not permit administrative agencies to ignore either the obligations imposed on them by Section 4(c) of the Administrative Procedure Act, 5 U.S.C. § 553(c), or more importantly, authorizing legislation requiring compilation of a "record" for purposes of judicial review. Compare the discussion at pp. 784-85 and 804-05 of Note, *The Judicial Role in Defining Procedural Requirements for Agency Rulemaking*, 87 Harv. L. Rev. 782 (1974) with the discussion at pp. 794, 801-02 of the same Note. Section 105(a) of the Safety Act, 15 U.S.C. § 1394(a), is such a statute, since it requires, upon the filing of a petition for judicial review, that the NHTSA "file in the court the record of the proceedings on which the [agency] based [its] order." In such a situation the reviewing court may give proper deference to whatever expertise the agency has developed in dealing with the area of regulation involved, but this expertise cannot serve as a substitute for the Safety Act's require-

ment of a "record of the proceedings" prepared in a meaningful manner in accordance with the Administrative Procedure Act. See *Portland Cement Ass'n v. Ruckelshaus*, *supra* at 393, n. 67. Moreover, this doctrine of agency expertise can have no application where the agency, instead of utilizing such expertise, attempts to rely upon specific data, documents, and other materials which are needed to demonstrate the validity of the regulation under review.

"Judicial review of informal rulemaking is in a state of flux." Verkuil, *Judicial Review of Informal Rulemaking*, 60 Va. L. Rev. 185, 224 (1974). While some commentators stress the importance to informal rulemaking of the agency's ability to act on the basis of its accumulated experience and, therefore, beyond the public record, see, e.g., Verkuil at 244-249, others insist upon the need for a record reflecting all of the relevant evidence considered by the agency, see Wright, *supra*, at 395; Hamilton, *Procedure for the Adoption of Rules of General Applicability: The Need for Procedural Innovation in Administrative Rulemaking*, 60 Calif. L. Rev. 1276, 1333-36 (1972). The need for resolution of this problem, which is a recurrent one, is now acute in view of the conflict existing between decisions of the Sixth and District of Columbia Circuits under regulatory statutes incorporating the same rulemaking procedures of the Administrative Procedure Act. Because this case involves supplementation of the rulemaking record at numerous stages subsequent to the close of the comment period and during the review process itself, it is a particularly appropriate vehicle for consideration by this Court of the limitations which should be imposed on agency action in developing a record for judicial review of informal rulemaking.

Because of the Safety Act's requirement of judicial review on the basis of a "record of the proceedings," 15 U.S.C. § 1394(a)(1), the present case presents the mirror image of the question which this Court considered in

*United States v. Allegheny-Ludlum Steel Corp.*, 406 U.S. 742 (1972). In that case, this Court ruled that a statute requiring agency rulemaking after hearing, but making no express provision for a supporting record, did not require compliance with the formal rulemaking requirements of the Administrative Procedure Act, 5 U.S.C. §§ 556-57. Under such circumstances, however, interested parties must still be given "an opportunity to participate in the rulemaking through appropriate submissions," which the agency must then consider in formulating a statement of the basis and purpose, 5 U.S.C. § 553(c), of the resulting regulation. 406 U.S. at 758.

There was no necessity for this Court to consider in *Allegheny-Ludlum* the effect of authorizing legislation which, while not requiring an agency hearing, provides for rulemaking on the basis of a "record." The present case, which involves a statute which permits informal rulemaking, but expressly requires judicial review on the basis of "the record of the proceedings," 15 U.S.C. § 1394(a)(1), will permit this Court to speak to the important issue of an agency's duty in the course of informal rulemaking to reveal on the agency record, for comment by interested parties, technical data and other material which the agency later submits to a reviewing court in defense of its regulation. Resolution of this issue by this Court is now essential and represents the next logical step in the development of definitive principles for judicial review of administrative rulemaking.

**(2) The Decision of the Court Below Misconstrues the National Traffic and Motor Vehicle Safety Act by Approving a Regulation of National Application Which Leaves Determination of Compliance to the Arbitrary Discretion of the Agency Responsible for Enforcement of the Regulation.**

The need for some requirement that administrative agencies make available for comment all data which an

agency intends to rely upon in support of a regulation is further demonstrated in this case by several deficiencies in the Uniform Tire Quality Grading Regulation which resulted from this rulemaking proceeding. These deficiencies stem from technical problems which, because they were never adequately resolved on the rulemaking record, prevent this Regulation from complying with the Safety Act and leave determination of compliance to the discretion of the agency responsible for enforcement of the Regulation.

This Regulation was promulgated by the NHTSA pursuant to Section 203 of the Safety Act, which called for development of a tire quality grading system "through standards established under subchapter I of this chapter." 15 U.S.C. § 1423. Section 103(a) of the Act, which governs all standards issued under subchapter I, requires that such standards "shall be practicable, shall meet the need for motor vehicle safety, and shall be stated in objective terms." 15 U.S.C. § 1392(a). The objectivity provision of Section 103(a) of the Act was interpreted by the Sixth Circuit itself in an earlier case as requiring what due process demands, which is that "tests to determine compliance must be capable of producing identical results when test conditions are exactly duplicated." *Chrysler Corp. v. Department of Transportation*, 472 F.2d 659, 676 (6th Cir. 1972). Although the Sixth Circuit assumed the applicability of the objectivity requirement of Section 103(a) of the Act, 15 U.S.C. § 1392(a), to this Regulation, the court nonetheless lowered the threshold for determining the validity of prescribed test procedures, saying that such procedures need only be "reasonably fair and reasonably reliable" to comply with the Act. (App. A p. 19.)

This abrogation of the objectivity requirement of Section 103(a) of the Act, 15 U.S.C. § 1392(a), was necessary to uphold this Regulation because the NHTSA was required to acknowledge in the preamble to the Reg-

ulation that variation in the course monitoring tire method for treadwear testing, which actually exceeds the treadwear grading increments established by the Regulation, would have to "be taken into account by the NHTSA in connection with its compliance testing" (App. F p. 8), and to admit in the court below that similar uncontrolled variations in the traction test procedure almost equaled the increments established for traction grading. Whether these variations were the "best that the state of the art permits," as claimed by the NHTSA in the court below (Resp. Br. 41), is not demonstrated on this rulemaking record and is, in any event, no excuse for ignoring the express substantive requirement of Section 103(a) of the Safety Act that compliance with any regulation promulgated under the Act be determined objectively and, as the Sixth Circuit said in *Chrysler Corp. v. Department of Transportation*, *supra* at 675, "without recourse to any subjective determination." See also *Automotive Parts & Accessories Ass'n v. Boyd*, 407 F.2d 330, 342 (D.C. Cir. 1968); *H&H Tire Co. v. Department of Transportation*, 471 F.2d 350, 355 (7th Cir. 1972); *National Tire Dealers & Retreaders Ass'n v. Brinegar*, 491 F.2d 31 (D.C. Cir. 1974).

The test procedures prescribed by this Regulation are not capable of producing identical results when test conditions are exactly duplicated. By reason of this approved departure from the requirements of the Safety Act, the NHTSA will undoubtedly seek to impose substantial civil penalties on this entire industry for non-compliance with standards which can only be determined on a subjective basis. The situation presented is, therefore, one which warrants the attention of this Court, not only because of serious irregularities in the rulemaking process, but also because the resulting regulation fails in several significant respects to comply with the express provisions of one of the most far-reaching and comprehensive regulatory statutes enacted by the Congress during the past decade.

## CONCLUSION

For the foregoing reasons, a writ of certiorari should issue to review the judgment and opinion of the Sixth Circuit.

Respectfully submitted,

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APPENDIX A

Nos. 75-1568 and 75-1785

**UNITED STATES COURT OF APPEALS**  
FOR THE SIXTH CIRCUIT

THE B. F. GOODRICH COMPANY, et al.,  
*Petitioners,*

v.

DEPARTMENT OF TRANSPORTATION, et  
al.,  
*Respondents.*

-----  
UNIROYAL, INC., et al.,  
*Petitioners,*

v.

DEPARTMENT OF TRANSPORTATION, et  
al.,  
*Respondents.*

PETITION for Review  
of a Regulation of  
the National High-  
way Traffic Safety  
Administration.

Decided and Filed September 2, 1976.

Before: EDWARDS, LIVELY and ENGEL, Circuit Judges.

EDWARDS, Circuit Judge, delivered the opinion of the Court,  
in which LIVELY, Circuit Judge, joined. ENGEL, Circuit Judge,  
(p. 50) filed a separate concurring opinion.

EDWARDS, Circuit Judge. In this case we review a strange  
record of delay and nonfeasance on the part of administrators  
charged with enforcing a regularly adopted statute of the  
United States.

In 1966, after years of legislative consideration, the Con-  
gress of the United States adopted and the President signed

a bill known as the National Traffic and Motor Vehicle Safety Act, 15 U.S.C. §§1381 *et seq.* (1970). Section 203 of that statute provided:

In order to assist the consumer to make an informed choice in the purchase of motor vehicle tires, within two years after September 9, 1966, the Secretary shall, through standards established under subchapter I of this chapter, prescribe by order, and publish in the Federal Register, a uniform quality grading system for motor vehicle tires. Such order shall specify the date such system is to take effect which shall not be sooner than one hundred and eighty days or later than one year from the date such order is issued, unless the Secretary finds, for good cause shown, that an earlier or later effective date is in the public interest, and publishes his reasons for such finding. The Secretary shall also cooperate with industry and the Federal Trade Commission to the maximum extent practicable in efforts to eliminate deceptive and confusing tire nomenclature and marketing practices.

Pub.L. 89-563, Title II, § 203, Sept. 9, 1966, 80 Stat. 729.

15 U.S.C. § 1423 (1970).

The Act was to become effective in 1968. In fact, the agency charged with formulating the § 203 regulation, the National Highway Traffic Safety Administration, did not promulgate it until May 20, 1975. This regulation finally established effective dates of January 1, 1976, July 1, 1976, and January 1, 1977, for the grading and labeling of radial-ply, bias-belted and bias-ply tires, respectively — ten years after adoption of the statute.<sup>1</sup>

It is not pertinent to our problem of judicial review to assess blame for this procrastination. We note that the agency's brief strongly implies that at least some of the delay was

<sup>1</sup> On August 14, 1975, the Sixth Circuit granted a motion to stay the effective dates pending judicial review.

due to the hostility of the industry which Congress proposed to regulate. We also note that the assignment of responsibility for administering § 203 has been changed a number of times.<sup>2</sup> It may also be that among the many problems of the United States of America in the last decade, providing reliable information to consumers so that they could make better decisions in buying tires appeared to be a low priority item to those responsible.

Whatever the reasons, it is a sad fact that a law of the land was allowed to lie unheeded until a consumer organization headed by Ralph Nader hailed the agency into a federal court to account for its nonfeasance. *Nash v. Brinegar*, No. 177-73 (D.D.C., May 2, 1974). The regulation now being tested as to legal validity gives every appearance of being adopted somewhat hastily on the heels of the consent decree which terminated that litigation. The consent decree provided for the promulgation (at long last) of a proposed rule on or before June 15, 1974, and a final rule "as expeditiously as possible."

To turn now to the specific facts of this case, Goodrich and seven other major tire companies in two petitions seek

<sup>2</sup> The original Act conferred authority to administer it on the Secretary of Commerce, Act of September 9, 1966, Pub. L. No. 89-563, §§103, 102(10), 80 Stat. 718. By subsequent legislation, Congress transferred all powers under the Act to the Secretary of Transportation, 49 U.S.C. § 1655(a)(6)(A). The Secretary had delegated these powers, with several exceptions not relevant here, to the Federal Highway Administration until March 22, 1970, when they were withdrawn and delegated to the National Highway Safety Bureau, contemporaneously with the Bureau's separation from the Highway Administration and elevation within the Department to the status of an administration, 49 U.S.C. § 1.51, 35 Fed. Reg. 4955. On January 1, 1971, the Bureau was renamed the National Highway Traffic Safety Administration (NHTSA) and the delegations of authority were amended to reflect the change in title 36 Fed. Reg. 430. The current delegation to the Administrator of the NHTSA to administer the Act appears at 49 C.F.R. § 1.51. The authority to issue notices of proposed rulemaking has been redelegated to the Associate Administrator (formerly the Assistant Director) for Motor Vehicle Programs, 35 Fed. Reg. 5118, 36 Fed. Reg. 13994, 49 C.F.R. § 501.8.

review of the validity of a regulation issued May 20, 1975, by the National Highway Traffic Safety Administration establishing uniform tire quality grading standards for pneumatic passenger tires, 49 C.F.R. § 575.104 (1975). The regulation requires grading tires for three performance qualities: treadwear, traction, and temperature resistance. It requires that this information be molded into the tire sidewalls, printed on paper labels affixed to the treads, and kept available in writing by the tire dealer.

### STANDARDS OF REVIEW

Petitioners' first two issues in this case invite us to write a treatise on the applicable standard of review of the administrative regulations under attack herein. We decline the invitation to write exhaustively on this subject since we are convinced that these arguments do not in any event control the results of this case.

Petitioners insist that we employ the "practicable" and "objective terms" language which Congress applied to "motor vehicle safety standards" in § 103(a) of the Act, 15 U.S.C. § 1392(a), and the "substantial evidence" standard of review applicable to formal rule making under the Administrative Procedure Act, 5 U.S.C. § 706(2)(E) (1970). The agency, on the other hand, insists that the regulations we review herein are not "motor vehicle safety standards" under § 103 of the Act and that they were properly adopted in informal rule-making under 5 U.S.C. § 553 (1970) and that this court must affirm the Administrator, unless his actions were "arbitrary, capricious or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A) (1970).

As to this argument, we hold that the procedures employed by the agency were informal rule-making procedures authorized under 5 U.S.C. § 553 (1970). Since we find no statutory language requiring a hearing, we believe that the agency

regulation is reviewable under the "arbitrary and capricious" standards set forth in 5 U.S.C. § 706(2)(A) (1970). See *United States v. Allegheny-Ludlum Steel Corp.*, 406 U.S. 742, 757 (1972). In perhaps an excess of caution, we shall express our view also under the "substantial evidence" standard urged upon us by petitioners and claimed by them to be mandated for this circuit by this court's opinion in *Chrysler Corp. v. Department of Transportation*, 472 F.2d 659 (6th Cir. 1972).

We turn then to consideration of petitioners' claim that the regulations under review are "motor vehicle safety standards" and hence must be reviewed by this court under the language of § 103(a) of the Act, 15 U.S.C. § 1392(a), which follows:<sup>3</sup>

(a) The Secretary shall establish by order appropriate Federal motor vehicle safety standards. Each such Federal motor vehicle safety standard shall be practicable, shall meet the need for motor vehicle safety, and shall be stated in objective terms.

15 U.S.C. § 1392(a) (1970).

Our consideration of the legislative history of this Act shows that in the Senate this legislation originated as two wholly separate bills. One was a general automobile safety law, S.3005, 89th Cong., 2d Sess. (1966). The other was a consumer protection bill concerned with tire quality grading, S.2669, 89th Cong., 2d Sess. (1966). The House bill, however,

<sup>3</sup> Petitioners also urge § 103(f) (3) and (4), 15 U.S.C. § 1392(f) (3) and (4), as relevant to the standard of our review. These provisions read as follows:

(f) In prescribing standards under this section, the Secretary shall—

(3) consider whether any such proposed standard is reasonable, practicable and appropriate for the particular type of motor vehicle or item of motor vehicle equipment for which it is prescribed; and

(4) consider the extent to which such standards will contribute to carrying out the purposes of this chapter.

We do not believe that the above provisions add anything of substance to the language of § 103(a) quoted *supra*.

encompassed both subjects. H.R. 13228, 89th Cong., 2d Sess. (1966). After each originating body had passed its bill or bills, the joint Conference Committee saw fit to merge them under one title. This last process may have served to help produce the ambiguity in the final product which plagues us in this appeal. The conferees failed to clarify their conflicting views on the question of whether the tire quality grading standards are also safety standards.

Section 103(a) of the Act, 15 U.S.C. § 1392(a), upon which petitioners rely for a more restrictive review standard, refers specifically to motor vehicle safety:

(a) The Secretary shall establish by order appropriate Federal motor vehicle safety standards. Each such Federal motor vehicle safety standard shall be practicable, shall meet the need for motor vehicle safety, and shall be stated in objective terms.

Section 203, 15 U.S.C. § 1423, on the other hand, provides:

In order to assist the consumer to make an informed choice in the purchase of motor vehicle tires, within two years after September 9, 1966, the Secretary shall, through standards established under sub-chapter I of this chapter, prescribe by order, and publish in the Federal Register, a uniform quality grading system for motor vehicle tires.

Legislative history discloses that two of the chief Senate sponsors for the tire grading system made it clear that, to them, the purpose of tire grading had little if any relationship to safety. Senator Magnuson, Chairman of the Commerce Committee, said:

It should be absolutely clear that the grading system has very little to do with minimum safety standards. Confusion in tire marketing is certainly an irritable and undesirable condition, but it does not involve the safety feature. 112 Cong. Rec. 6915 (1966)

Senator Ribicoff, another sponsor, said:

There is absolutely no way to know the value you are getting for your money; and while the chairman is absolutely correct, that the grading has nothing to do with minimum safety standards, yet from the consumer's standpoint, I think he should be aware of what type of tire he is getting, and whether he is paying a proper price for it. *Id.*

The House Committee Report, however, took a different point of view:

Although some have argued that [tire] quality grading is solely an economic problem, the committee is satisfied this is not so and that it has a direct relationship to safety. Standards as to grading are necessary to assure safety. *Grading standards, as well as any other tire standards related to safety, are within the scope of the authority of the Secretary under title I of the bill.* H. R. Rep. No. 1776, 89th Cong., 2d Sess. 33 (1966). (Emphasis added).

For purposes of this case we assume, without finally deciding, that the language of Section 103 is applicable to the instant regulation. Section 203, of course, specifically provides for establishment of the uniform quality grading system "through standards established under subchapter I of this chapter." Subchapter I contains both the section which provides for review by this court (§ 105, 15 U.S.C. § 1394) and the section (§ 103) which provides that motor vehicle safety standards shall be "practicable" and "stated in objective terms." We leave to a future case, where this language might make a critical difference in decision, consideration of the government's argument that the subchapter I standards referred to are those contained in Section 112(d) of the statute, 15 U.S.C. § 1401(d), rather than those contained in Section 103.

Turning now to the merits of this case, we find that petitioners have attacked the agency regulation on every possible front. Their claims include the following:

1. The agency in adopting its Regulation failed to follow the procedures required by the National Traffic and Motor Vehicle Safety Act and by the Administrative Procedure Act.
2. The grading information system required by the regulation is unreasonable, impractical and inconsistent with the Act.
3. The grading standards in the Regulation do not comply with the Act and are not supported by substantial evidence. In particular petitioners claim that traction, treadwear and temperature resistance tests devised by the agency do not correlate with tire performance on the road and do not produce uniform and reliable results.
4. The lead time specified by the Regulation is arbitrary, unreasonable and not supported by substantial evidence.

### THE PROCEDURAL OBJECTIONS

We have searched this voluminous record for evidence to support petitioners' complaints of procedural abuses and have found none. As we have already noted, the industry which Congress and the President decided to regulate in this consumer information provision has known for ten years that this form of regulation was coming. Further, the industry has been on notice of the pendency of the instant informal rule-making proceeding since at least 1971. It has had more than ample opportunity to offer comment and, indeed, the record is full of comment by the Rubber Manufacturers Association and many individual rubber companies.

This said, we recognize that we have not met precisely the procedural objections raised by petitioners. Their claim is that (although they were thoroughly familiar with the agency's proposed informal rule-making concerning testing by use of control tires<sup>4</sup>) the agency abruptly shifted to a regulation

<sup>4</sup> Under the control tire approach, the candidate tires are graded for treadwear on unspecified courses of the manufacturer's choice. The wear rate of a candidate tire is determined and is then compared to that of a specially constructed "control tire."

calling for use of a tire testing ground near San Angelo, Texas, and course monitoring tires for measuring the changes in the course itself caused by weather, temperature or wear. Petitioners also claim that this change was occasioned by the Nader litigation, *Nash v. Brinegar*, *supra*, to which we have already referred.

We find no reason to invalidate the Regulation or remand it for further proceedings on any of these grounds. As we have indicated, we have no doubt that *Nash v. Brinegar* did help to spur this reluctant dragon into some increased regulatory activity. But, surely, such was needed. In addition, the failure of the industry to produce viable bids for a control tire coincided in time with the *Nash v. Brinegar* litigation. It is this failure which the agency points to as occasioning its abrupt change.

Our examination of this record convinces us that the problems likely to develop from testing tires on the San Angelo course as a result of the use of course monitoring tires will be minor compared to those which would have accompanied control tire testing without a standard course.

More importantly, of course, as to appellants' procedural complaints, our examination of the schedule of published notices indicates that notices were published giving adequate time for industry response. Indeed, industry responses were many and detailed. The first notice of proposed rule-making was published on September 21, 1971. It received considerable negative industry response and was withdrawn on April 21, 1972. The agency then determined that the three consumer information aspects which should be tested were treadwear, traction and high speed performance. A proposed regulation oriented toward these objectives was issued March 7, 1973, and the regulation using the control tire approach was issued as a "final rule" on January 4, 1974. It was withdrawn in May of 1974 after agency advertisement for competitive bids for control tires produced only two proposals, neither of which the agency considered responsive or legal.

Notice 12 which involved the San Angelo course testing approach and the use of a course monitoring tire was published June 14, 1974, with revisions on August 9, 1974. Timely comment on the proposed rule closed on September 12, 1974. At the request of the industry, however, comment upon the whole rule and its revisions was reopened for ten days beginning April 14, 1975, with the agency assurance that comments received after that date would be given full consideration. The rule itself was published May 20, 1975.

We will deal separately under the Grading Standard section of this opinion with petitioners' attacks upon the agency's selection (and failure to select) course monitoring tires. This issue excepted, we are able to find no abuse of informal rule-making in the procedure followed by the agency.

The industry also asserts that its procedural rights have been abused by the fact that the agency "dumped" documents into the record after the final closing date for public comment. The agency answers that the documents complained about were simply part of the administrative record which had to be prepared for this court as a result of the industry's petition for review. The Administrative Procedure Act does not require that every bit of background information used by an administrative agency be published for public comment. Our review of this issue indicates that it is lacking in merit. The basic data upon which the agency relied in formulating the regulation was available to petitioners for comment.

### THE GRADING INFORMATION SYSTEM

Petitioners attack the grading information system principally upon two grounds. First, they allege that the information provided is not meaningfully related to safety and "will in many instances be affirmatively misleading." Second, they assert that the informational requirements are unnecessarily and unreasonably expensive and in regard to the paper label requirement, impossible to perform to a satisfactory degree so as actually to reach the consumer.

Section 203, 15 U.S.C. § 1423, is not primarily a safety law. It is designed, as its language and its history show, primarily to provide information to tire buyers from which they can tell something about the product they are buying. It is related to safety in the sense that an owner can know whether his tires are good, average or poor in relation to three safety related characteristics.

Important industry representatives either proposed or agreed with the three tire characteristics of treadwear, traction and temperature resistance<sup>5</sup> as to which the agency intends to offer information. In this proceeding, although appellants' attack is upon the Regulation as a whole, there is no real dispute about the three tire characteristics which it seeks to measure. Measured by any standard of review to which we have previously referred, there is "ample evidence" in the whole record to require us to uphold the agency's choice of tire characteristics to be measured. *Chrysler Corp. v. Department of Transportation*, 515 F.2d 1053 (6th Cir. 1975).

### MISLEADING INFORMATION

Appellants' point concerning possible misleading effect of the information provided does, however, raise a question to which we do not find adequate answers. They assert with regard to temperature resistance information: "There is no qualifying language of any kind which would indicate that the grade is based only on heat resulting from high speed at proper loads and inflation. . . ." (Emphasis added.) Obviously a satisfactory grade on temperature resistance is no guarantee against blowouts due primarily to a combination of high speed and either underinflation or excess loading. A simple warning to this effect would seem to be in order. We believe that this issue should be remanded for agency consideration.

<sup>5</sup> Industry references were to "high speed performance." This record shows that high speed can lead to heat build-up and blowouts.

Similarly appellants note that traction grading is based only upon straight ahead stopping tests. Their claims include the suggestion that "lateral" traction characteristics are likewise important but not covered. The agency's response on this score is that thus far no practical test for lateral traction has been devised and that the agency is working to devise one. There is no industry response to the contrary. Nonetheless, it may be desirable to point out the traction test's limitation in this regard. We recognize that adding such warnings to the information molded into the tire wall would be highly impractical. But on this record we cannot see any similar impracticality in adding them to the proposed tire labels and dealer (point of sale) information sheets. The issue of warning tire consumers that lateral traction is not covered by the traction test is remanded for consideration by the agency.

By these remands we do not purport to adopt appellants' arguments. Rather, we remand simply because we do not find any adequate answer to them in this record and we feel that they have sufficient public interest merit to require agency review.

### COSTS

Appellants also attack as arbitrary and unreasonable in cost the regulations on informational requirements — particularly that which requires that all tires (except original equipment tires) carry a paper label supplying the required grading information. The record shows that information pertaining to tires is, according to widespread industry practice, currently 1) molded into tire sidewalls, 2) furnished to dealers, and 3) printed on labels pasted to tires. Adding the § 203 information will undoubtedly add some costs — but hardly ones which are beyond the contemplation of Congress when it passed the statute.

The industry's particular attack is centered upon the paper label required to be pasted to each tire. Appellants claim that the paper label requirement will add 15 to 17 million dollars

of cost, that the label is impossible to keep affixed to every tire, and that, anyhow, less than a majority of prospective purchasers will ever see the label.

The agency responses include the following paragraphs from the Federal Trade Commission's submission in this record:

Finally, the Commission is aware of the sharply divided views in the docket on the subject of paper tread labels. The argument has been raised that the tread label will not be seen by many consumers because the labels are attached to tires which are usually installed in the garage of the tire store. This argument has some merit, but labels on tires which are on display, or on tires purchased without mounting services, will be readily seen by the consumer.

The alternative to the paper tread labels — point of sale materials — would not be as reliable a method of communicating the desired information to the consumer. From an enforcement standpoint, we have been advised that it is beyond the power of NHTSA to require dealers to have point of sale materials available in a conspicuous place; whereas NHTSA has clear authority over requiring labels on tires up to time of sale.

In these circumstances, the Commission would suggest that tread labels be required, although we would encourage tire manufacturers and dealers to use point of sale materials as well.

Additionally, the agency has commented on this topic:

Tread labels are presently used to identify tires throughout the tire industry. If labels should be detached, manufacturers can furnish dealers with replacement labels which they can affix before a tire is sold. *Although the actual tires a motorist purchases may not be seen by him prior to delivery, representative tires are usually displayed in most locations where tires are sold. Such display tires would have labels affixed to their tread surface, and the information would thus be available to purchasers before*

*sale in an obvious and conspicuous location.* (Emphasis added). 39 Fed. Reg. 20810 (1974).

We find these responses to be convincing and supported by "ample evidence" in this record. *Chrysler Corp. v. Department of Transportation*, 515 F.2d 1053 (6th Cir. 1975).

As to petitioners' protests about the cost of the tire labels, it seems obvious to us, as it does to the agency, that full information (as contrasted to the minimum information supplied on the tire wall) can be cheaply provided to the ultimate consumer merely by some expansion of the tire label now in widespread use in the industry. The agency cites a three cent per label cost estimate by Uniroyal for this expansion. Its own estimate as shown in the Inflation Impact Review, parts of which we reproduce as Appendix B to this opinion, gives an overall estimate of five cents per tire for all labeling costs. While we have noted the largely unsupported estimate in petitioners' brief of \$17 million cost per year for tire labels, even that figure would produce a per tire cost of only 12-plus cents when adjusted to the 133-plus million tires to which labels would need to be affixed.

Thus we find "ample evidence" to support the portion of the agency's Regulation pertaining to grading information and no violation of the standards of § 103 of the Act.

### THE GRADING STANDARDS AND TESTS

Petitioners attack all three grading standards as unrelated to highway safety. As noted above, we have already rejected this argument. Petitioners' heaviest fire, however, is reserved for the test procedures established by the rule for each standard and particularly for the claimed variations in the testing devices which they assert are sufficient to invalidate at least the traction and treadwear tests.

The agency has provided a summary of the grading standard and tests established by the Uniform Tire Quality Grading Standard Rule:

### Treadwear

Treadwear grades are based on a tire's projected mileage (the distance which it is expected to travel before wearing down to its treadwear indicators) as tested on a single, predetermined test run of approximately 6400 miles. The test course has been established by the agency in the vicinity of San Angelo, Texas. The course is approximately 400 miles long, and each treadwear test will require 16 circuits. A tire's tread depth is measured periodically during the test and, then, based upon these measurements, its projected mileage is calculated. A tire's treadwear grade is expressed as the percentage which its projected mileage represents of a nominal 30,000 miles,\* rounded off to the nearest lower 10% increment. For example, a tire with a projected mileage of 24,000 would be graded "80," while one with a projected mileage of 40,000 would be graded "130."

The treadwear performance of a candidate tire is measured along with that of course monitoring tires (CMTs) of the same construction type (bias, belted bias, or radial) that are used to monitor changes in course severity. The CMTs are tires procured by the agency for purchase and use at the test site. The CMTs are manufactured in a single production lot at a single plant. Therefore, the CMTs are more homogeneous than tires bought at random.

Each test convoy consists of one car equipped with four CMTs and three or fewer other cars equipped with candidate tires of the same construction type. Candidate tires on the same axle are identical, but front tires on a test vehicle may differ from rear tires as long as all four are of the same size designation. After a two-circuit break-in period, the initial tread depth of each tire is determined by averaging the depth measured at six equal-

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\* This is in accord with what the RMA "strongly recommend[ed], the use of a treadwear rating system that will indicate relative performance on a percentage basis."

ly spaced locations in each groove. At the end of every two circuits (800 miles), each tire's tread depth is measured again, tires are rotated, and wheel alignments are readjusted if necessary. At the end of the 16-circuit test, each tire's overall wear rate is calculated from the nine measured tread depths and their corresponding mileages after break-in by using the regression line technique described in the Preambles to Notices 15 and 17.

### Traction

Traction performance in the grading procedure relates to the ability of a tire to stop (or decelerate) a motor vehicle on a wet roadway. This ability to stop a vehicle is dependent on the frictional forces developed at the tire-pavement interface. The frictional force relates to the resistance to sliding of the tire over the pavement; a large frictional force developed at the tire-pavement interface, therefore, indicates that the motor vehicle will be stopped quickly and in a short distance on that pavement. Low friction and hence poor traction degrades a tire's traction on wet surfaces. In traction testing for tires and pavements, the measurement of the frictional force developed at the tire-pavement interface is expressed in terms of coefficients of friction, or skid numbers (SN), and is measured utilizing a two-wheeled skid trailer.

Traction testing using the skid trailer has in recent years become standardized. The RMA has noted that "locked wheel braking traction as measured by a skid trailer has received the most attention and [that] generally acceptable testing methods have been published (e.g., ASTM E274-70 and SAE J345a)." The tire industry, as well as highway engineers, have adopted the skid trailer for the measurement of traction. Indeed, the RMA commented that the proposed utilization of the test methods and equipment for the grading of traction performance was generally acceptable with some modifications. (*Id.*)

Agency sponsored research in 1967 demonstrated that a tire which performs well on one surface does not necessarily perform well on another surface. In subsequent research to select appropriate surfaces, four pavements typical of most roadways surfaces in the United States were tested. A fifth and atypical surface, representing bleeding asphalt, was also studied. Bleeding asphalt is a very slippery surface when wet and was estimated to comprise only 5 percent or less of the total roadway surfaces in the United States. Of the five surfaces studied, three were asphalt, one concrete, and one was asphalt coated with clay-filled tar emulsion to simulate bleeding asphalt. Because the three asphalt surfaces gave skidding results that were highly correlated, the agency was able to eliminate two asphaltic surfaces, since the results on the remaining one would apply generally to all three. The bleeding asphalt was atypical, and therefore it was decided to employ one asphalt and one concrete surface to correlate with most road conditions. Traction grading results obtained on these two surfaces installed at the San Angelo facility will enable the consumer to make an informed choice with respect to traction.

Contrary to their new "litigation position" (PB 57, PB 20), the Petitioners had proposed that the grading procedure for traction be based on the test results from *one* surface. Petitioner B. F. Goodrich has indicated that the proposed surface with a wet coefficient of 0.50 be eliminated because accidents occur more frequently on smooth roads characterized by a 0.30 wet coefficient. (Supp. App. 12). In addition, Petitioner Firestone commented that the NHTSA evaluation test on the test pads constructed at San Angelo will indicate little, if any, advantage to the use of two different test surfaces, and recommended that the test procedure include only the one skid pad which gives the best and most consistent results. The agency rejected this pre-litigation proposal of Petitioners since such a grading scheme would lead the consumer to believe that the tire found to be best on a single grading pavement would be best on all other

pavements. The traction grading procedure specified in the Rule requires that candidate tires be tested on two surfaces. The highest traction grade will be assigned only to the tires that achieve the highest rating on *both* surfaces. This practice will insure that a tire given the highest traction grade will indeed perform better on most surfaces than another tire with a lower grade.

### Temperature Resistance

The third performance characteristic measured by the final Rule is named "temperature resistance" rather than "high speed performance" as in previous NPRMs. Sustained high temperature can cause the material of the tire to degrade and reduce tire life, and excessive temperature can lead to sudden tire failure. Therefore, the Rule provides for three grades of temperature resistance which are believed to be meaningful to the consumer. This characteristic is measured by pressing the tire against a laboratory test wheel which is rotated at successively higher speeds. A grade of "C" corresponds to the minimum requirements of FMVSS 109 (the long existing standard with which all newly manufactured tires must comply), which requires successful completion of the 425 rpm test stage. Grade "B" indicates that the tire has successfully completed the 500 rpm test stage, and "A" the 575 test rpm stage.

Our examination of this record shows "ample evidence" to uphold the test procedures summarized above under the headings of Temperature Resistance and Traction. In both instances test equipment widely recognized in industry, as well as in government safety testing, is employed.

It should be observed that we have approached petitioners' arguments about the testing devices and procedures with full realization that no measuring devices yet made by man are perfect. The fact that moisture and heat affect the accuracy

of the household yardstick would help make it useless in a die shop. But these minor variations are hardly grounds for eliminating this generally reliable tool from normal household use. We recognize that every reasonable effort should be made by the agency to assure the accuracy of the grades assigned to tires under the three selected standards. But clearly no test procedures designed to grade millions of tires are going to approach perfection.

Section 203 of the Act conveys no governmental power to ban the sale of any tire no matter how low it scores on the tests ultimately employed. The primary impact of this regulation upon the industry will undoubtedly be that the lower the tire grade, the lower the price the public is likely to pay for it in a competitive market. This situation calls for reasonably fair and reasonably reliable grading procedures, not theoretical perfection. These we find to have been fully employed in relation to the temperature resistance and traction tests outlined in the Rule (*See Appendix A*) and accurately summarized above.

We likewise find no reason to disturb the agency's decision to change from treadwear testing using control tires employed on many different test tracks under a wide variety of physical circumstances and operators to the use of the single test track operated by the agency at San Angelo, Texas, described in the Rule. *See Appendix A*. The record supports the agency's conclusion that many variables will thus be eliminated and a closer approach to standard and repeatable testing of treadwear will thus be made possible.

### COURSE MONITORING TIRES

The agency and petitioners are, however, in agreement on at least one proposition, namely, that when the candidate tires<sup>6</sup> are tested, course monitoring tires should be run over

<sup>6</sup> Candidate tires are those supplied by the industry for grading.

the same course at the same time in the same convoy in order to allow for correction of any variances in the treadwear characteristics of the course itself. As the length of the yardstick varies with heat and moisture, so the friction of the San Angelo course pavement will vary depending on whether it is hot or cold, wet or dry, newly laid or much worn.

This record supports the employment of course monitoring tires as contemplated by the Rule. We likewise conclude that ample evidence supports the agency plan to procure course monitoring tires by careful selection of industry tire brands purchased in single lots in each tire construction category — bias, bias belted and radial. The agency indicates that each lot purchased will have been built by one operator and subject to rigid material and quality controls with coefficients of variation below 5%.

Much of petitioners' briefing, however, is devoted to an issue which we find it impossible to resolve on this record. They attack with great vigor the adequacy and accuracy of the testing of the one course monitoring tire (radial) which had been chosen as of the time this record was closed. They point out that they have not had an opportunity to comment in this record upon the bias and bias belted CMTs which the agency's brief indicates have now been chosen.

It appears that the agency had (as of the close of this record) run two tests upon its selected radial course monitoring tire. The agency, however, relied upon only one of the tests (T-1014) and that test the agency concedes produced unsatisfactory results in terms of variations. These the agency asks that we ignore as due to some unnamed vehicle malfunction.

While we recognize that course monitoring tires (like the yardstick) cannot be perfectly accurate, we believe the industry is entitled to know that all three of the course monitoring tires have been tested with results which meet the agency's own standards — standards which we have approved above.

We also believe that when the agency seeks to rely, as it does concerning the radial CMT, upon only one test for a CMT that it cannot claim its result is supported by ample evidence or its choice is other than arbitrary when that test is admittedly flawed by a problem not clearly identified or explained on this record.

As to this issue, the case is remanded to the agency for completion of the testing and selection of the three course monitoring tires, or if this has already been fully and satisfactorily accomplished, for reopening of the record for inclusion of the results and for a brief period of industry comment thereon. Without intending to interfere with agency discretion in this regard we would deem 30 days to be ample.

### THE LEAD TIME

Petitioners also assert that the "lead times" provided for implementation of this regulation by the industry (basically 18 months) are impossible for it to achieve. This argument is based primarily upon the contention that the test facilities at San Angelo which the agency contemplates furnishing will not be able to accomplish the agency testing within the lead times specified. The agency's response to this argument is summarized below:

Using the RMA's estimate of 9,500 total domestic tire types and 1,400 total foreign tire types (III App. 932) or a total of 10,900 tire types, and testing a judiciously selected 40 percent sample of tire size-line combinations (*see* Wallace affidavit, paragraph 7), 4,360 tire types must be tested during the initial 18 months.

The agency recognized that during the first six months of testing for radial tires there may be some new designs phased in toward the end of that period, and accordingly allowed a contingency factor of 15% to cover this transition period. (This is approximately the number chosen by many of Petitioners' affiants in support of the stay

motion.) The agency also made an allowance of 5% for test time required by the agency's enforcement testing, and an allowance of 20% for vehicle breakdown, accidents, maintenance, and adverse weather.

Using the course to its maximum capacity, 15,000 tire types can be graded in 18 months, whereas only 6,318 tire types need to be tested, even making allowances for the aforementioned contingencies. Thus, the course needs to be used to only 42% of its capacity to implement the Rule's treadwear grading schedule. In essence the agency has demonstrated that, based upon the reasonable assumptions presented above, and allowing for all reasonable contingencies, there is a large "safety factor" for treadwear testing.

This means that unforeseen contingencies of a magnitude of 2.4 times the total time allowed can be handled. Stated in other terms, it indicates that the number of vehicles per shift could be reduced from 400 to 200 (the number given in the revised E.I.A.), or the sample of candidate tires could be increased from 4 to 8, and still meet the proposed implementation schedule (if no unforeseen contingencies arise).

## (2) Traction Implementation Schedule.

The traction test circuit is long enough (1.4 miles) to permit the safe operation of 10 trailers at one time. To make a conservative estimate, however, the agency based its calculation on only 7 trailers operating at one time. The capacity of the course for traction testing averages 5 candidate tires per day and 7 trailers can feasibly operate at one time. Hence, the course is capable of grading an average of 35 tires per day.

Making allowances of 20% for trailer downtime, which is in agreement with expressed testimony of all of Petitioners' affidavits in support of the stay motion, and 2% for the agency's enforcement testing, as well as 15%

for transient design changes during the first testing period, the agency found that 10,021 tire types could be graded in 18 months. Using the RMA's estimate of approximately 9500 total domestic tire types and 1400 total foreign tire types (III App. 932), there are a total of approximately 10,900 tire types. As with treadwear testing, it is the judgment of the agency's experienced personnel that testing 4 tire sizes judiciously selected from an average of 10 tire sizes per line is sufficient to provide reasonable extrapolation for rating of all sizes. (Wallace affidavit, paragraph 2, Supp. App. 87, Opp. App. 43; Dugoff, Brenner and Scheiner affidavit, paragraph 26i, Supp. App. 79). Therefore, 4360 tire types must be tested during the initial 18 months. Thus, a required efficiency use of the skid pads of only 43.5% is necessary to test one sample of each required tire type for traction.

The agency has demonstrated that, based upon the reasonable assumptions presented above, and allowing for all reasonable contingencies, there is also a large "safety factor" for traction testing.

This means that unforeseen contingencies of a magnitude of 2.3 times the total time allowed can be handled. Stated in other terms, it indicates that two samples of each required tire type could be tested for traction instead of one, and the proposed implementation schedule could still be met, if no major unforeseen contingencies arise, because there is a large "safety factor."

In fact, these calculations are conservative, as shown by a Society of Automobile Engineers technical paper authored by representatives of Petitioners General, Uniroyal, Goodyear, and Firestone. That paper reported that traction performance varies insignificantly from size to size within a line. (Record, N4-48(a)). While the agency's calculations are based on the assumption that manufacturers would test 4 tire sizes selected from an average of 10 tire sizes per line, this technical paper shows that testing of only one size per line is probably sufficient.

There is "ample evidence" in the record to support these conclusions. *Chrysler Corp. v. Department of Transportation*, 515 F.2d 1053 (6th Cir. 1975). We do not, however, pretend to choose between the absolutely conflicting evidence presented on this score by petitioners and the agency. That decision is one which is committed to the administrative agency concerned subject to limited review by this court.

The responsibility of meeting the test course break-in and operating problems will fall not on the industry but on the agency. Obviously, if the dire predictions of petitioners prove true, the agency can meet the problem by amending the Rule and temporarily (or permanently) reducing the number of tires to be tested in each tire size line or by extending the lead time. We note from its brief that the agency clearly intends to exercise such discretion in order to meet the delay occasioned by this litigation:

Should the Rule be upheld, the agency will consider extending these implementation dates in order to take into account the effect of the stay ordered by the Court on August 14, 1975.

In accordance with what we have said above, with the two exceptions noted, we approve the disputed agency Rule entitled Uniform Tire Quality Grading Standards, 49 C.F.R. § 575.104 (1975). The approval is based upon our review of the entire record and represents our considered judgment that all aspects of the rule which we approve were supported by substantial evidence and were not the product of arbitrary or capricious agency action.

Further, our approval is based upon our belief that the Rule is fully supported when reviewed under the standards set forth in Section 103 of the Act.

Those portions of the Rule which deal directly with information to be printed on tire labels and point of sale information sheets and which deal directly with course monitoring

tire selection and testing are hereby remanded to the respondent agency for further consideration in accordance with this opinion's comments under the headings of MISLEADING INFORMATION and COURSE MONITORING TIRES.

No costs are awarded.

## APPENDIX A

## § 575.104 Uniform tire quality grading standards.

(a) *Scope.* This section requires motor vehicle and tire manufacturers and tire brand name owners to provide information indicating the relative performance of passenger car tires in the areas of treadwear, traction, and temperature resistance.

(b) *Purpose.* The purpose of this section is to aid the consumer in making an informed choice in the purchase of passenger car tires.

(c) *Application.* This section applies to new pneumatic tires for use on passenger cars manufactured after 1948. However, this section does not apply to deep tread, winter-type snow tires.

(d) *Requirements—(1) Information.* (i) Each manufacturer of tires, or in the case of tires marketed under a brand name, each brand name owner, shall provide grading information for each tire of which he is the manufacturer or brand name owner in the manner set forth in paragraphs (d)(1)(i)(A) and (d)(1)(i)(B) of this section. The grades for each tire shall be only those specified in paragraph (d)(2) of this section. Each tire shall be able to achieve the level of performance represented by each grade with which it is labeled. An individual tire need not, however, meet further requirements after having been subjected to the test for any one grade.

(A) Each tire shall be graded with the words, letters, symbols, and figures specified in paragraph (d)(2) of this section, permanently molded into or onto the tire sidewall between the tire's maximum section width and shoulder in accordance with one of the methods described in Figure 1.

(B) Each tire, except a tire sold as original equipment on a new vehicle, shall have affixed to its tread surface in a manner such that it is not easily removable a label containing its

grades and other information in the form illustrated in Figure 2. The treadwear grade attributed to the tire shall be either imprinted or indelibly stamped on the label adjacent to the description of the treadwear grade. The label shall also depict all possible grades for traction and temperature resistance. The traction and temperature resistance performance grades attributed to the tire shall be indelibly circled.

(ii) In the case of information required in accordance with § 575.6(c) to be furnished to prospective purchasers of motor vehicles and tires, each vehicle manufacturer and each tire manufacturer or brand name owner shall as part of that information list all possible grades for traction and temperature resistance, and restate verbatim the explanations for each performance area specified in Figure 2. The information need not be in the same format as in Figure 2, but must indicate clearly and unambiguously the grade in each performance area for:

(A) In the case of a vehicle manufacturer, each tire offered for sale on a new motor vehicle; and

(B) In the case of a tire manufacturer or brand name owner, each tire of that manufacturer or brand name owner offered for sale at the particular location.

(iii) In the case of information required in accordance with § 575.6(a) to be furnished to the first purchaser of a new motor vehicle, each manufacturer of motor vehicles shall as part of that information list all possible grades for traction and temperature resistance and restate verbatim the explanation for each performance area specified in Figure 2. The information need not be in the format of Figure 2, but must clearly and unambiguously indicate the quality grades for the tires with which the vehicle is equipped.

(2) *Performance—(i) Treadwear.* Each tire shall be graded for treadwear performance with the word "TREADWEAR" followed by a number of two or three digits represent-

ing the tire's grade for treadwear, expressed as a percentage of the NHTSA nominal treadwear value, when tested in accordance with the conditions and procedures specified in paragraph (e) of this section. Treadwear grades shall be multiples of 10 (e.g., 80, 150).

(ii) *Traction.* Each tire shall be graded for traction performance with the word "TRACTION," followed by the symbols 0, \*, or \*\* (either asterisks or 5-pointed stars) when the tire is tested in accordance with the conditions and procedures specified in paragraph (f) of this section.

(A) The tire shall be graded 0 when the adjusted traction coefficient is either:

(1) 0.38 or less when tested in accordance with paragraph (f)(2) of this section on the asphalt surface specified in paragraph (f)(1)(i) of this section, or

(2) 0.26 or less when tested in accordance with paragraph (f)(2) of this section on the concrete surface specified in paragraph (f)(1)(i) of this section.

(B) The tire may be graded \* only when its adjusted traction coefficient is both:

(1) More than 0.38 when tested in accordance with paragraph (f)(2) of this section on the asphalt surface specified in paragraph (f)(1)(i) of this section, and

(2) More than 0.26 when tested in accordance with paragraph (f)(2) of this section on the concrete surface specified in paragraph (f)(1)(i) of this section.

(C) The tire may be graded \*\* only when its adjusted traction coefficient is both:

(1) More than 0.47 when tested in accordance with paragraph (f)(2) of this section on the asphalt surface specified in paragraph (f)(1)(i) of this section, and

(2) More than 0.35 when tested in accordance with paragraph (f)(2), of this section on the concrete surface specified in paragraph (f)(1)(i) of this section.

(iii) *Temperature resistance.* Each tire shall be graded for temperature resistance performance with the word "TEMPERATURE" followed by the letter A, B, or C, based on its performance when the tire is tested in accordance with the procedures specified in paragraph (g) of this section. A tire shall be considered to have successfully completed a test stage in accordance with this paragraph if, at the end of the test stage, it exhibits no visual evidence of tread, sidewall, ply, cord, innerliner or bead separation, chunking, broken cords, cracking or open splices as defined in § 571.109 of this chapter, and the tire pressure is not less than the pressure specified in paragraph (g)(1) of this section.

(A) The tire shall be graded C if it fails to complete the 500 rpm test stage specified in paragraph (g)(9) of this section.

(B) The tire may be graded B only if it successfully completes the 500 rpm test stage specified in paragraph (g)(9) of this section.

(C) The tire may be graded A only if it successfully completes the 575 rpm test stage specified in paragraph (g)(9) of this section.

(e) *Treadwear grading conditions and procedures—(1) Conditions.* (i) Tire treadwear performance is evaluated on a specific roadway course approximately 400 miles in length, which is established by the NHTSA both for its own compliance testing and for that of regulated persons. The course is designed to produce treadwear rates that are generally representative of those encountered in public use for tires of differing construction types. The course and driving procedures are described in Appendix A to this section.

(ii) Treadwear grades are evaluated by first measuring the performance of a candidate tire on the government test course, and then correcting the projected mileage obtained to account for environmental variations on the basis of the performance of course monitoring tires of the same general construction type (bias, bias-belted, or radial) run in the same convoy. The three types of course monitoring tires are made available by the NHTSA at Goodfellow Air Force Base, San Angelo, Texas, for purchase by any persons conducting tests at the test course.

(iii) In convoy tests each vehicle in the same convoy, except for the lead vehicle, is throughout the test within human eye range of the vehicle immediately ahead of it.

(iv) A test convoy consists of no more than four passenger cars, each having only rear-wheel drive.

(v) On each convoy vehicle, all tires are mounted on identical rims: either a "test rim" as defined with respect to that tire in paragraph S3 of Standard No. 109 (§ 571.109 of this chapter) which is of the width listed for the applicable tire size designation under the words "test rim width" in Table I of the Appendix to Standard No. 109, or such a "test rim" having a width within  $-0+0.50$  inches of the width listed.

(2) *Treadwear grading procedure.* (i) Equip a convoy with course monitoring and candidate tires of the same construction type. Place four course monitoring tires on one vehicle. On each other vehicle, place four candidate tires with identical size designations. On each axle, place tires that are identical with respect to manufacturer and line.

(ii) Inflate each candidate and each course monitoring tire to an inflation pressure 8 pounds per square inch less than its maximum permissible inflation pressure.

(iii) Load each vehicle so that the load on each course monitoring and candidate tire is 85 percent of the load speci-

fied in Appendix A of § 571.109 of this chapter (Standard No. 109) at the inflation pressure specified in paragraph (e)(2)(ii) of this section.

(iv) Adjust wheel alignment to that specified by the vehicle manufacturer.

(v) Subject candidate and course monitoring tires to "break-in" by running the tires in convoy for two circuits of the test roadway (800 miles). At the end of the first circuit, rotate each vehicle's tire by moving each front tire to the same side of the rear axle and each rear tire to the opposite side of the front axle.

(vi) After break-in, allow the tires to cool to the inflation pressure specified in paragraph (e)(2)(ii) of this section or for two hours, whichever occurs first. Measure, to the nearest 0.001 inch, the tread depth of each candidate and course monitoring tire, avoiding treadwear indicators, at six equally spaced points in each groove. For each tire compute the average of the measurements. Do not include those shoulder grooves which are not provided with treadwear indicators.

(vii) Adjust wheel alignment to the manufacturer's specifications.

(viii) Drive the convoy on the test roadway for 6,400 miles. After each 800 miles:

(A) Following the procedure set out in paragraph (e)(2)(vi) of this section, allow the tires to cool and measure the average tread depth of each tire;

(B) Rotate each vehicle's tires by moving each front tire to the same side of the rear axle and each rear tire to the opposite side of the front axle.

(C) Rotate the vehicles in the convoy by moving the last vehicle to the lead position. Do not rotate driver position within the convoy.

(D) Adjust the wheel alignment to the vehicle manufacturer's specifications, if necessary.

(ix) Determine the projected mileage for each candidate tire as follows:

(A) For each course monitoring and candidate tire in the convoy, using the average tread depth measurements obtained in accordance with paragraph (e)(2)(vi) of this section and the corresponding mileages as data points, apply the method of least squares as described in Appendix C to this section to determine the estimated regression line of  $y$  on  $x$  given by the following formula:

$$y = a + \frac{bx}{1000}$$

Where:

$y$  = average tread depth in mils,

$x$  = miles after break-in,

$a$  =  $y$  intercept of regression line (reference tread depth) in mils, calculated using the method of least squares; and

$b$  = the slope of the regression line in mils of tread depth per 1,000 miles, calculated using the method of least squares. This slope will be negative in value. The tire's wear rate is defined as the absolute value of the slope of the regression line.

(B) Average the wear rates of the four course monitoring tires as determined in accordance with paragraph (e)(2)(ix)(A) of this section.

(C) Determine the course severity adjustment factor by dividing the base wear rate for the course monitoring tire (see note below) by the average wear rate for the four course monitoring tires determined in accordance with paragraph (e)(2)(ix)(B) of this section.

NOTE: The base wear rates for the course monitoring tires will be furnished to the purchaser at the time of purchase.

(D) Determine the adjusted wear rate for each candidate tire by multiplying its wear rate determined in accordance with paragraph (e)(2)(ix)(A) of this section by the course severity adjustment factor determined in accordance with paragraph (e)(2)(ix)(C) of this section.

(E) Determine the projected mileage for each candidate tire using the following formula:

$$\text{Projected mileage} = \frac{1000(a - 62)}{b'} + 800$$

Where:

$a$  =  $y$  intercept of regression line (reference tread depth) for the candidate tire as determined in accordance with paragraph (e)(2)(ix)(A) of this section.

$b'$  = the adjusted wear rate for the candidate tire as determined in accordance with paragraph (e)(2)(ix)(D) of this section.

(F) Compute the percentage of the NHTSA nominal tread-wear value for each candidate tire using the following formula:

$$P = \frac{\text{Projected Mileage}}{30,000} \times 100$$

Round off the percentage to the nearest lower 10 percent increment.

(f) *Traction grading conditions and procedures*—(1) *Conditions.* (i) Tire traction performance is evaluated on skid pads that are established, and whose severity is monitored, by the NHTSA both for its compliance testing and for that of regulated persons. The test pavements are asphalt and concrete surfaces constructed in accordance with the specifica-

tions for pads "C" and "A" in the "Manual for the Construction and Maintenance of Skid Surfaces," National Technical Information Service No. DOT-HS-800-814. The surfaces have locked wheel traction coefficients when evaluated in accordance with paragraphs (f)(2)(i) through (f)(2)(vii) of this section of  $0.50 \pm 0.10$  for the asphalt and  $0.35 \pm 0.10$  for the concrete. The location of the skid pads is described in Appendix B to this section.

(ii) The standard tire is the American Society for Testing and Materials (ASTM) E 501 "Standard Tire for Pavement Skid Resistance Tests."

(iii) The pavement surface is wetted in accordance with paragraph 3.5, "Pavement Wetting System," of ASTM Method E 274-70, "Skid Resistance of Paved Surfaces Using a Full-Scale Tire."

(iv) The test apparatus is a test trailer built in conformity with the specifications in paragraph 3, "Apparatus", of ASTM Method E 274-70, and instrumented in accordance with paragraph 3.3.2 of that method, except that "wheel load" in paragraph 3.2.2 and tire and rim specifications in paragraph 3.2.3 of that method are as specified in the procedures in paragraph (f)(2) of this section for standard and candidate tires.

(v) The test apparatus is calibrated in accordance with ASTM Method F 377-74, "Standard Method for Calibration of Braking Force for Testing of Pneumatic Tires" with the trailer's tires inflated to 24 psi and loaded to 1085 pounds.

(vi) Consecutive tests on the same surface are conducted not less than 30 seconds apart.

(vii) a standard tire is discarded in accordance with ASTM Method E 501.

(2) *Procedure.* (i) Prepare two standard tires as follows:

(A) Condition the tires by running them for 200 miles on a pavement surface.

(B) Mount each tire on a "test rim" as defined in paragraph S3 of Standard No. 109 (§ 571.109 of this chapter) which is of a width within  $-0 + 0.50$  inches of the width listed for the applicable tire size designation under the words "test rim width" in Table I of the Appendix to Standard No. 109. Then inflate the tire to 24 psi.

(C) Statically balance each tire-rim combination.

(D) Allow each tire to cool to ambient temperature and readjust its inflation pressure to 24 psi.

(ii) Mount the tires on the test apparatus described in paragraph (f)(1)(iv) of this section and load each tire to 1085 pounds.

(iii) Tow the trailer on the asphalt test surface specified in paragraph (f)(1)(i) of this section at a speed of 40 mph, lock one trailer wheel, and record the locked-wheel traction coefficient on the tire associated with that wheel between 0.5 and 1.5 seconds after lockup.

(iv) Repeat the test on the concrete surface, locking the same wheel.

(v) Repeat the tests specified in paragraphs (f)(2)(iii) and (f)(2)(iv) of this section for a total of 10 measurements on each test surface.

(vi) Repeat the procedures specified in paragraphs (f)(2)(iii) through (f)(2)(v) of this section, locking the wheel associated with the other tire.

(vii) Average the 20 measurements taken on the asphalt surface to find the standard tire traction coefficient for the asphalt surface. Average the 20 measurements taken on the concrete surface to find the standard tire traction coefficient for the concrete surface.

(viii) Prepare two candidate tires of the same construction type, manufacturer, line, and size designation in accordance with paragraph (f)(2)(i) of this section, mount them on the test apparatus, and test one of them according to the procedures of paragraphs (f)(2)(ii) through (v) of this section, except load each tire to 85 percent of the load specified at 24 psi for the tires' size designation in Appendix A of Standard No. 109 (§ 571.109 of this chapter). Average the 10 measurements taken on the asphalt surface to find the candidate tire traction coefficient for the asphalt surface. Average the 10 measurements taken on the concrete surface to find the candidate tire traction coefficient for the concrete surface.

(ix) Compute a candidate tire's adjusted traction coefficient for asphalt ( $u_a$ ) by the following formula:

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$$u_a = \text{Measured candidate tire coefficient for asphalt} + 0.50 \\ - \text{Measured standard tire coefficient for asphalt}$$

(x) Compute a candidate tire's adjusted traction coefficient for concrete ( $u_c$ ) by the following formula:

$$u_c = \text{Measured candidate tire coefficient for concrete} + 0.35 \\ - \text{Measured standard tire coefficient for concrete}$$


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(g) *Temperature resistance grading.* (1) Mount the tire on any test rim as defined in S3 of Standard No. 109 (§ 571.109 of this chapter) and inflate it to 2 pounds per square inch less than its maximum permissible inflation pressure.

(2) Condition the tire-rim assembly at an ambient temperature of 105° F. for 3 hours.

(3) Adjust the pressure again to 2 pounds per square inch less than the maximum permissible inflation pressure.

(4) Mount the tire-rim assembly on an axle, and press the tire tread against the surface of a flat-faced steel test wheel that is 67.23 inches in diameter and at least as wide as the section width of the tire.

(5) During the test, including the pressure measurements specified in paragraph (g)(1) and (g)(3) of this section, maintain the temperature of the ambient air, as measured 12 inches from the edge of the rim flange at any point on the circumference on either side of the tire, at 105° F. Locate the temperature sensor so that its readings are not affected by heat radiation, drafts, variations in the temperature of the surrounding air, or guards or other devices.

(6) Press the tire against the test wheel at the load specified in Appendix A of § 571.109 of this chapter (Motor Vehicle Safety Standard No. 109) for the tire's size designation and the inflation pressure that is 8 pounds per square inch less than the tire's maximum permissible inflation pressure.

(7) Rotate the test wheel at 250 rpm for 2 hours.

(8) Remove the load, allow the tire to cool to 105° F. or for 2 hours, whichever occurs last, and readjust the inflation pressure to 2 pounds per square inch less than the tire's maximum permissible inflation pressure.

(9) Reapply the load and without interruption or readjustment of inflation pressure, rotate the test wheel at 375 rpm for 30 minutes, and then at successively higher rates in 25 rpm increments, each for 30 minutes, until the tire has run at 575 rpm for 30 minutes, or to failure, whichever occurs first.

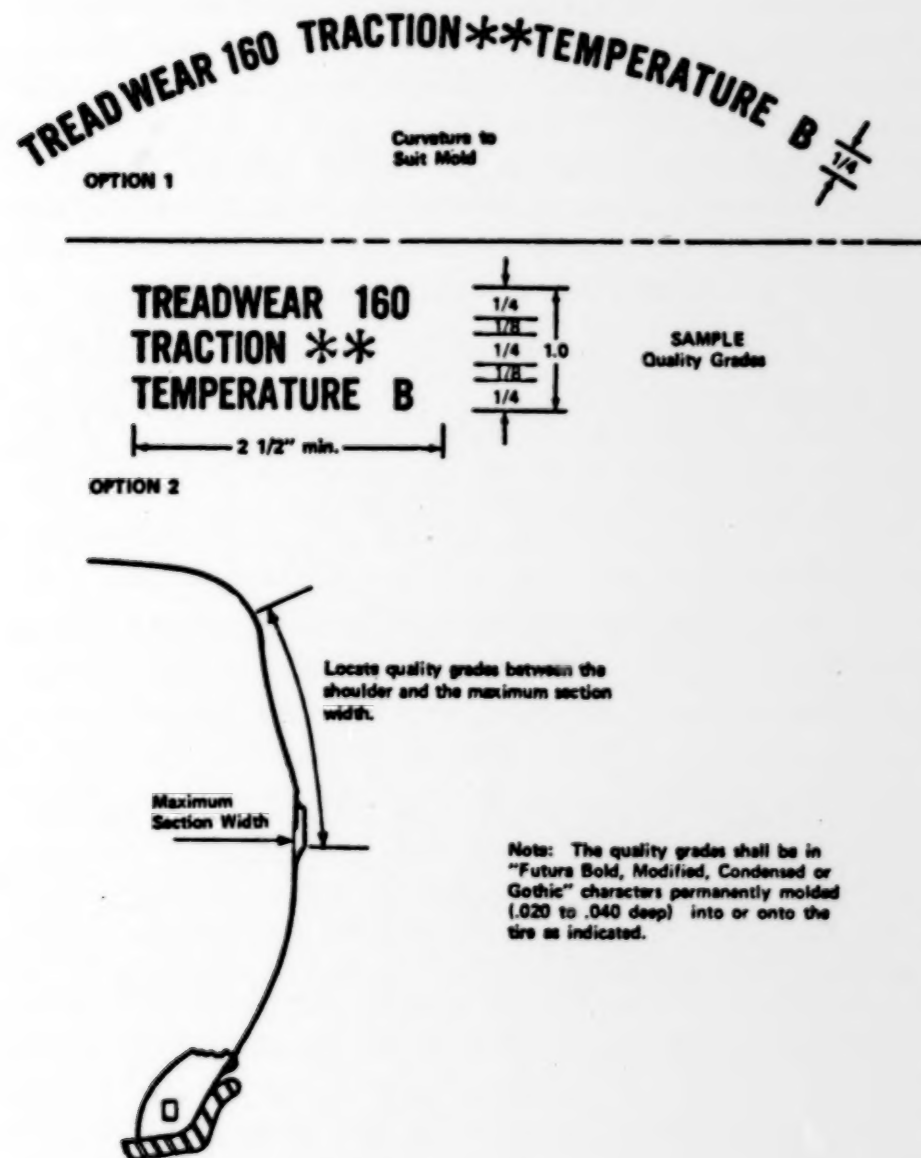


Figure 1

FIGURE 2—DOT QUALITY GRADES

ALL PASSENGER CAR TIRES MUST CONFORM TO FEDERAL SAFETY REQUIREMENTS IN ADDITION TO THESE GRADES

### Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 200 would wear twice as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate.

### Traction\*\*, \*, and 0

The traction grades are \*\* (the highest), \*, and 0, and represent the tire's ability to stop on wet pavements as measured on asphalt and concrete test surfaces. A tire marked 0 for traction may have poor traction performance.

### Temperature: A, B, and C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal motor vehicle safety standards. Grades B and A represent higher levels of performance than the minimum required by law.

### APPENDIX A—TREADWEAR TEST COURSE AND DRIVING PROCEDURES

*Introduction.* The test course consists of three loops of a total of 400 miles in the geographical vicinity of Goodfellow AFB, San Angelo, Texas.

The first loop runs south 143 miles through the cities of

Eldorado, Sonora, and Juno, Texas, to the Camp Hudson Historical Marker, and returns by the same route.

The second loop runs east over Farm and Ranch Roads (FM) and returns to its starting point.

The third loop runs northwest to Water Valley, northeast toward Robert Lee and returns via Texas 208 to the vicinity of Goodfellow AFB.

*Route.* The route is shown in Figure 3. The table identifies key points by number. These numbers are encircled in Figure 3 and in parentheses in the descriptive material that follows.

*Southern Loop.* The course begins at the intersection (1) of Ft. McKavitt Road and Paint Rock Road (FM388) at the northwest corner of Goodfellow AFB.

Drive east via FM 388 to junction with Loop Road 306 (2). Turn right onto Loop Road 306 and proceed south to junction with US277 (3). Turn onto US277 and proceed south through Eldorado and Sonora (4), continuing on US277 to junction with FM189 (5). Turn right onto FM189 and proceed to junction with Texas 163 (6). Turn left onto Texas 163, proceed south to Camp Hudson Historical Marker (7) and U-turn in highway. Reverse route to junction of Loop Road 306 and FM 388 (2).

*Eastern Loop.* From junction of Loop Road 306 and FM388 (2) make right turn onto FM388 and drive east to junction with FM2334 (13). Turn right onto FM2334 and proceed south across FM765 (14) to junction of FM2334 and US87 (15). Make U-turn and return to junction of FM388 and Loop Road 306 (2) by the same route.

*Northwestern Loop.* From junction of Loop Road 306 and FM388 (2), make right turn onto Loop Road 306. Proceed onto US277, to junction with FM2105 (8). Turn left onto FM2105 and proceed west to junction with US87 (10). Turn right on US87 and proceed northwest to the junction with

FM2034 near the town of Water Valley (11). Turn right onto FM2034 and proceed north to Texas 208 (12). Turn right onto Texas 208 and proceed south to junction with FM 2105 (9). Turn left onto FM2105 and proceed east to junction with US277 (8). Turn right onto US277 and proceed south onto 306 to junction with 388 (2). Turn right onto 388 and proceed to starting point at junction of Ft. McKavitt Road and FM388 (1).

*Driving instructions.* The drivers shall run at posted speed limits throughout the course unless an unsafe condition arises. If such condition arises, the speed should be reduced to the maximum safe operating speed.

*Braking Procedures at S T O'P signs.* There are a number of intersections at which stops are required. At each of these intersections a series of signs is placed in a fixed order as follows:

#### SIGN LEGEND

Highway Intersection 1000 (or 2000) Feet

STOP AHEAD

Junction XXX

Direction Sign (Mereta—) —

STOP or YIELD

*Procedures.* 1. Approach each intersection at posted speed limit.

2. When abreast of the STOP AHEAD sign, apply the brakes so that the vehicle decelerates smoothly to 20 mph when abreast of the direction sign.

3. Come to a complete stop at the STOP sign or behind any vehicle already stopped.

*Key points along treadwear test course approximate  
mileages, and remarks*

|                                       | Mileages | Remarks     |
|---------------------------------------|----------|-------------|
| 1 Fort McKavitt Rd. and<br>F.M. 388.  | 0        |             |
| 2 F.M. 388 and loop 306 ..            | 3        | STOP        |
| 3 Loop 306 and U.S. 277 ..            | 10       |             |
| 4 Sonora .....                        | 72       |             |
| 5 U.S. 277 and F.M. 189 ..            | 88       |             |
| 6 F.M. 189 and Texas 163 ..           | 124      |             |
| 7 Historical marker (Camp<br>Hudson). | 143      | U-TURN      |
| 4 Sonora .....                        | 214      |             |
| 3 Loop 306 and U.S. 277 ..            | 276      |             |
| 2 F.M. 388 and loop 306 ..            | 283      |             |
| 13 F.M. 388 and F.M. 2334 ..          | 290      | STOP        |
| 14 F.M. 2334 and F.M. 765 ..          | 292      | STOP        |
| 15 F.M. 2334 and U.S. 87 ...          | 295      | STOP/U-TURN |
| 14 F.M. 2334 and F.M. 765 ..          | 298      | STOP        |
| 13 F.M. 388 and F.M. 2334 ..          | 300      | STOP        |
| 2 F.M. 388 and loop 306 ..            | 307      | STOP        |
| 8 U.S. 277 and F.M. 2105 ..           | 313      |             |
| 9 F.M. 2105 and Texas 208             | 317      | STOP        |
| 10 F.M. 2105 and U.S. 87 ..           | 320      | STOP        |
| 11 F.M. 2034 and U.S. 87 ..           | 338      |             |
| 12 F.M. 2034 and Texas 208            | 362      | STOP        |
| 9 F.M. 2105 and Texas 208             | 387      |             |
| 8 F.M. 2105 and U.S. 277 ..           | 391      | YIELD       |
| 2 F.M. 388 and loop 306 ..            | 397      |             |
| 1 Fort McKavitt Rd. and<br>F.M. 388.  | 400      |             |

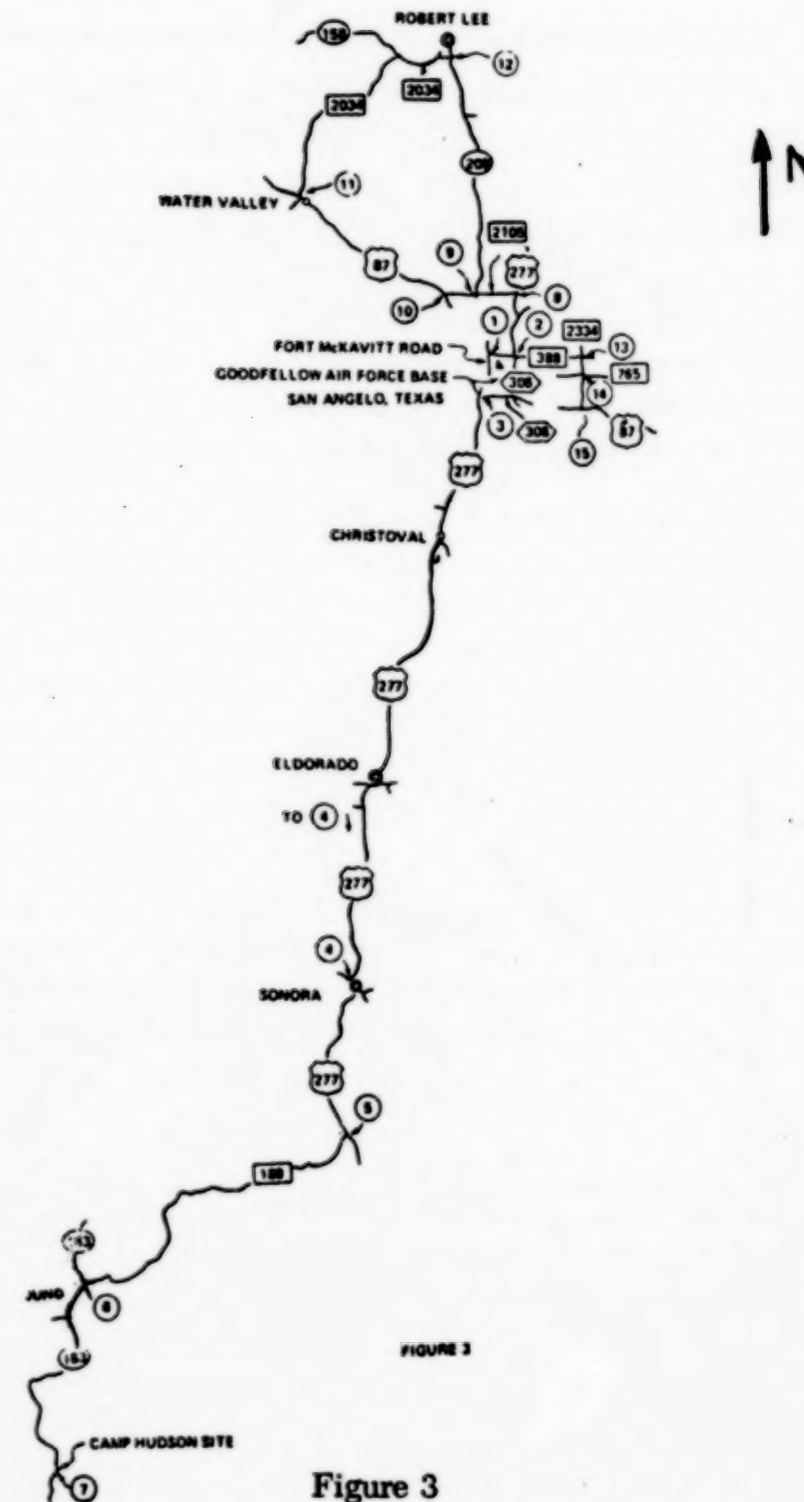


Figure 3

## APPENDIX B—TRACTION SKID PADS

Two skid pads have been laid on an unused runway and taxi strip on Goodfellow AFB. Their location is shown in Figure 4.

The asphalt skid pad is 600 ft. x 60 ft. and is shown in black on the runway in Figure 4. The pad is approached from either end by a 75 ft. ramp followed by 100 ft. of level pavement. This arrangement permits the skid trailers to stabilize before reaching the test area. The approaches are shown on the figure by the hash-marked area.

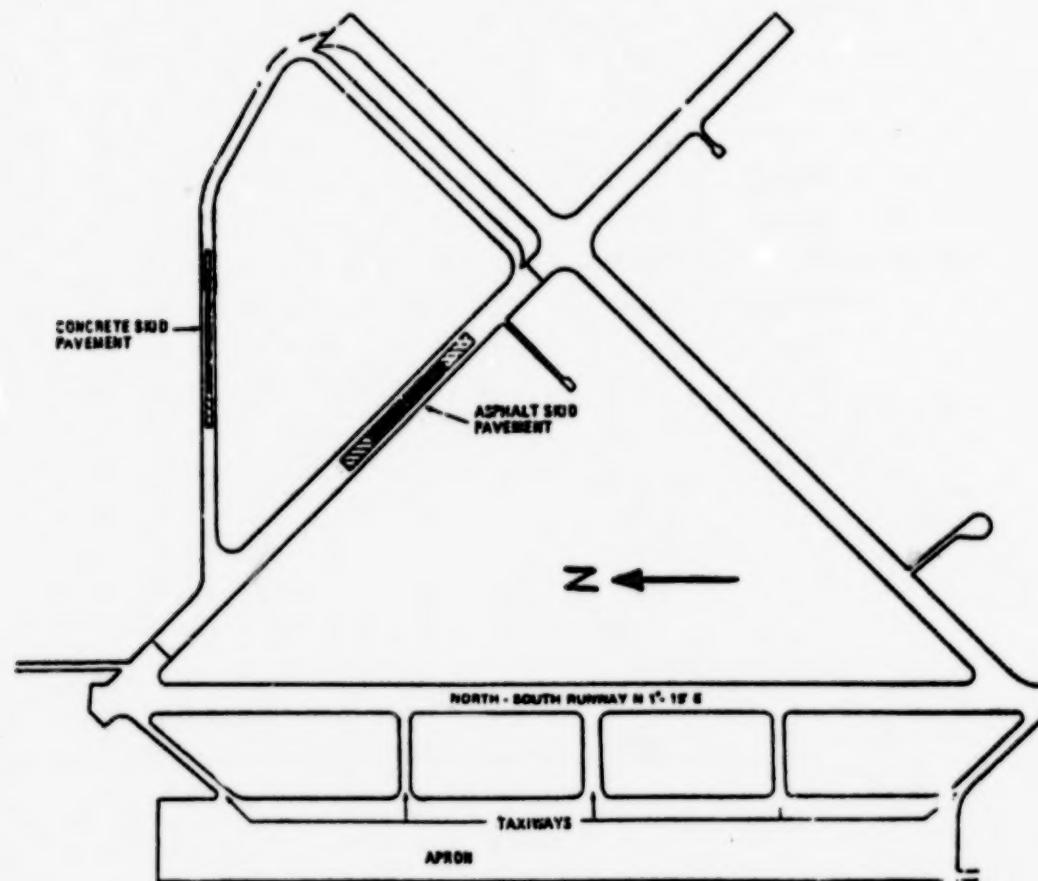


Figure 4

The concrete pad is 600 ft. x 48 ft. and is on the taxi strip. The approaches to the concrete pad are of the same design as those for the asphalt pads.

A two lane asphalt road has been built to connect the runway and taxi strip. The road is parallel to the northeast-southwest runway at a distance of 100 ft. The curves have super-elevation to permit safe exit from the runway at operating speeds.

## APPENDIX C—METHOD OF LEAST SQUARES

The method of least squares is a method of calculation by which it is possible to obtain a reliable estimate of a true physical relationship from a set of data which involve random error. The method may be used to establish a regression line that minimizes the sum of the squares of the deviations of the measured data points from the line. The regression line is consequently described as the line of "best fit" to the data points. It is described in terms of its slope and its "y" intercept.

The graph in Figure 5 depicts a regression line calculated using the least squares method from data collected from a hypothetical treadwear test of 6,400 miles, with tread depth measurements made at every 800 miles.

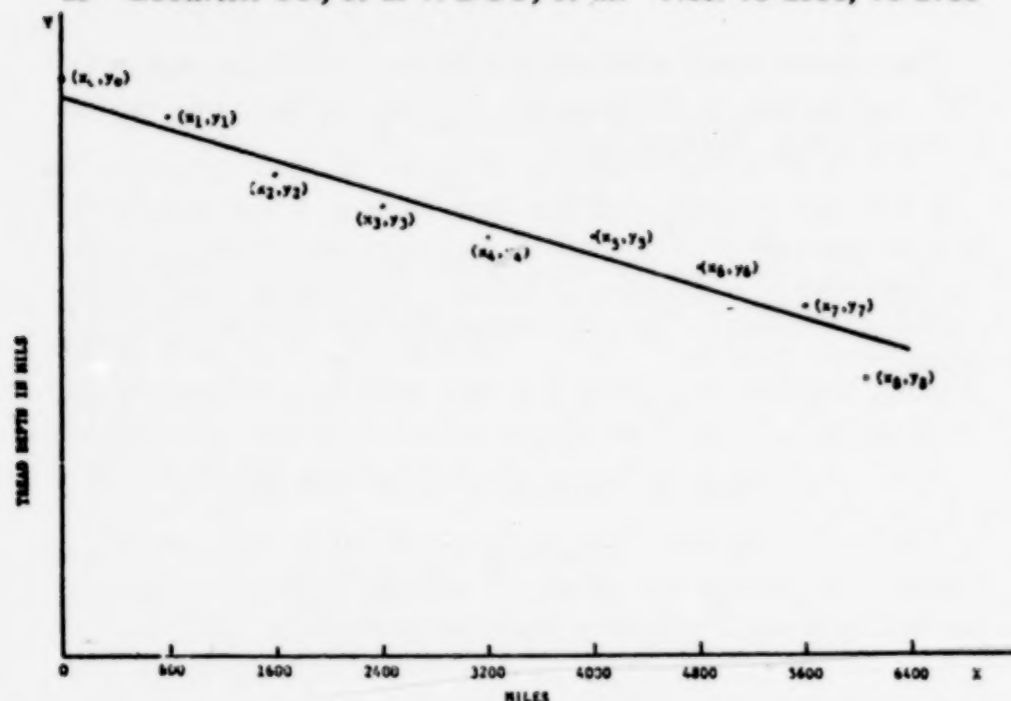


FIGURE 4

In this graph,  $(x_j, y_j)$  [ $j=0, 1, \dots, 8$ ] are the individual data points representing the tread depth measurements (the overall average for the tire with 6 measurements in each tire groove) at the beginning of the test

(after break-in) and at the end of each 800-mile segment of the test.

The absolute value of the slope of the regression line is an expression of the miles of tread worn per 1,000 miles, and is calculated by the following formula:

$$b = 1000 \frac{\left( \sum_{j=0}^8 x_j y_j - \frac{1}{9} \sum_{j=0}^8 x_j \sum_{j=0}^8 y_j \right)}{\sum_{j=0}^8 x_j^2 - \frac{1}{9} \left( \sum_{j=0}^8 x_j \right)^2}$$

The "y" intercept of the regression line (a) in mils is calculated by the following formula:

$$a = \frac{1}{9} \sum_{j=0}^8 y_j - \frac{b}{9000} \sum_{j=0}^8 x_j$$

(Secs. 103, 112, 119, 201, 203; Pub. L. 89-563, 80 Stat. 718 (15 U.S.C. 1392, 1401, 1407, 1421, 1423); delegation of authority at 49 CFR 1.51.) [40 FR 23077, May 28, 1975, as amended at 40 FR 28071, July 3, 1975]

Effective Date Note: For all requirements other than the molding requirement of para-

graph (d)(1)(i)(A): January 1, 1976, for radial ply tires; July 1, 1976, for bias-belted tires; January 1, 1977, for bias ply tires. For paragraph (d)(1)(i)(A): July 1, 1976, for radial ply tires; January 1, 1977, for bias-belted tires; July 1, 1977, for bias-ply tires.

## APPENDIX B

### Excerpts from INFLATION IMPACT REVIEW – UNIFORM TIRE QUALITY GRADE STANDARD

#### 4. a. Cost Effects

- (1) *Cost impact on consumers, businesses, markets, or Federal, State, or local government.*

*NHTSA Cost Analysis – Annual Gross Cost for Implementation of UTQGS*

1. There is a maximum of 1,800 tire lines (based upon NHTSA survey, and confirmed by industry comments).
2. Ten tire sizes per line is an average estimate.
3. Of the ten sizes per line available, it is estimated that 4 tire sizes per line will actually be tested for treadwear and values for the other sizes will be extrapolated from those obtained for the 4 measured sizes.
4. The rule provides for an implementation schedule of 18 months for grading all tire types.  
 $1,800 \times 4 = 4,800$  candidate tire line tests  
 \_\_\_\_\_ for treadwear per year, during  
 1½ yrs. implementation period

Note: Based upon normal tire design cycle changes, it is estimated that tires will require retesting for treadwear every 3 years. In other words, while 4,800 candidate tire lines are tested during the first year, the average will stabilize at 2,400 per year.

5. The UTQGS regulation specifies testing 2 tires of each candidate type. However, in order to amass a larger data base, we will assume each manufacturer tests 4 tires

of each candidate type (i.e., we are assuming a larger amount of testing and test cost, by a factor of 2:1, over that specified, resulting in more pessimistic cost figures).

6. Treadwear test uses a 4-car convoy — 1 vehicle equipped with course monitoring tires, plus 3 vehicles equipped with candidate tires. Hence, based on assumptions above, there will be 4,800 vehicles/yr. testing candidate tires and 1,600 vehicles/yr. testing course monitoring tires during the implementation period. Hence, treadwear testing will use a maximum of 6,400 vehicles per year.
7. Length of treadwear test prescribed in rule equals 6,400 miles plus 800 miles break-in, or a total mileage of 7,200.  
7,200 miles x 6,400 vehicles = 46,000,000 vehicle-miles per year
8. Cost of treadwear testing — \$0.33 per vehicle-mile. This is based upon the most recent contractor test costs at San Angelo, Texas.
9. Total maximum annual cost of treadwear testing = \$0.33 x 46,000,000 equals \$15.2 million.
10. Estimated cost of tires:  
4,800 candidate test vehicles x 4 tires/veh.  
x \$20/tire = \$384,000  
1,600 course monitoring vehicles x 4 tires/veh.  
x \$40/tire = \$256,000  

---

Total tire cost — treadwear \$640,000
11. Total cost — Treadwear  
\$15.2M + \$0.6M = \$15.8M
12. Cost of Traction testing  
1,800 tire lines x 10 sizes/line x \$5/test = \$ 90,000  
Cost of tires = 18,000 x \$20/tire = 360,000  

---

Total \$450,000

13. UTQGS total test cost (traction + treadwear)  
= \$15.8M + 0.5M = \$16.3M

14. Cost per tire manufactured (200M per year)  
= \$16.3M =

---

200M

8 cents / tire — Direct cost  
Add 8 cents / tire — Overhead & Markup

Estimated cost of labeling = 5 cents / tire — includes markup

---

Total gross cost = 21 cents / tire — maximum

---

At 21 cents per tire, the total gross cost to consumers and businesses is \$0.21 x 200M = \$42M per year. Hence, UTQGS does not qualify as a major proposal and an inflationary impact statement is not required.

ENGEL, Circuit Judge, concurring.

I refrain from joining those portions of the opinion touching on the delay in promulgation of the rule, not from any particular disagreement with them, but from uncertainty where blame ought finally to rest, if anywhere. So much is clear from the record: the issue has been complex and difficult for the Congress, for the agency, for the industry, and finally, for us. In all other respects, however, I fully concur in Judge Edwards' well-reasoned opinion.

B-1

APPENDIX B

No. 75-1568

UNITED STATES COURT OF APPEALS

FOR THE SIXTH CIRCUIT

Filed Sept. 30, 1976

THE B. F. GOODRICH COMPANY, THE GOOD-  
YEAR TIRE & RUBBER COMPANY, THE  
COOPER TIRE AND RUBBER COMPANY, THE  
GENERAL TIRE & RUBBER COMPANY, THE  
FIRESTONE TIRE & RUBBER COMPANY, AND  
THE MANSFIELD TIRE & RUBBER COMPANY,

*Petitioners,*

v.

DEPARTMENT OF TRANSPORTATION; WIL-  
LIAM T. COLEMAN, SECRETARY; NATIONAL  
HIGHWAY TRAFFIC SAFETY ADMINISTRA-  
TION; AND JAMES B. GREGORY, ADMINIS-  
TRATOR,

*Respondents.*

ORDER

Upon consideration, it is ORDERED on page 4, sixth line from the bottom in the slip opinion filed herein on September 2, 1976, be and it hereby is amended to read: "Arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."

ENTERED BY ORDER OF  
THE COURT

JOHN P. HEHMAN,  
*Clerk,*

GRACE KELLER

By: Grace Keller, Chief Deputy

C-1

APPENDIX C

Nos. 76-1568 and 75-1785

UNITED STATES COURT OF APPEALS

FOR THE SIXTH CIRCUIT

Filed Oct. 8, 1976

THE B. F. GOODRICH COMPANY, et al.,  
*Petitioners,*  
  
vs.  
  
DEPARTMENT OF TRANSPORTATION, et al.,  
*Respondents,*  
  
and  
  
UNIROYAL, INC., et al.,  
*Petitioners,*  
  
vs.  
  
DEPARTMENT OF TRANSPORTATION, et al.,  
*Respondents.*

ORDER

Before: EDWARDS, LIVELY and ENGEL, Circuit Judges.

On receipt and consideration of a "Petition for Clarification and for Rehearing, or, in the Alternative, for Rehearing in Banc"; and

No active judge in this court having moved for rehearing in banc and therefore the case having been referred to the panel which heard it in the first instance; and

This court noting no issue set forth in said petition which had not been properly considered and decided in our preceding opinion and order,

Now, therefore, said petition is hereby denied.

ENTERED BY ORDER OF  
THE COURT

JOHN P. HEHMAN  
*Clerk*

D-1

APPENDIX D

Nos. 75-1568 and 75-1785

UNITED STATES COURT OF APPEALS

FOR THE SIXTH CIRCUIT

Filed Nov. 3, 1976

THE B. F. GOODRICH COMPANY, et al.,  
*Petitioners,*  
  
vs.  
  
DEPARTMENT OF TRANSPORTATION, et al.,  
*Respondents.*  
  
UNIROYAL, INC., et al.,  
*Petitioners,*  
  
vs.  
  
DEPARTMENT OF TRANSPORTATION, et al.,  
*Respondents.*

ORDER

Before: EDWARDS, LIVELY and ENGEL, Circuit Judges.

On receipt and consideration of a motion to stay issuance of mandate, filed by three of the original eight companies involved as petitioners in the above-styled case; and

On receipt and consideration of a response thereto filed by respondents,

Said motion for stay of issuance of mandate is granted for thirty (30) days from the date of this order. Any further stay must be sought from the United States Supreme Court or a Justice thereof.

ENTERED BY ORDER OF  
THE COURT

JOHN P. HEHMAN  
*Clerk*

**APPENDIX E****Text of Statutory Provisions****I. Administrative Procedure Act****5 U.S.C. § 553****§ 553. Rule making.**

(c) After notice required by this section, the agency shall give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments with or without opportunity for oral presentation. After consideration of the relevant matter presented, the agency shall incorporate in the rules adopted a concise general statement of their basis and purpose. When rules are required by statute to be made on the record after opportunity for an agency hearing, sections 556 and 557 of this title apply instead of this subsection.

**II. National Traffic and Motor Vehicle Safety Act****15 U.S.C. § 1392****§ 1392. Motor vehicle safety standards.****(a) Establishment.**

The Secretary shall establish by order appropriate Federal motor vehicle safety standards. Each such Federal motor vehicle safety standard shall be practicable, shall meet the need for motor vehicle safety, and shall be stated in objective terms.

**(b) Applicability of Administrative Procedure Act.**

The Administrative Procedure Act shall apply to all orders establishing, amending, or revoking a Federal motor vehicle safety standard under this subchapter.

**(f) Factors to be considered in prescribing standards.**

In prescribing standards under this section, the Secretary shall —

(1) consider relevant available motor vehicle safety data, including the results of research, development, testing and evaluation activities conducted pursuant to this chapter;

(2) consult with the Vehicle Equipment Safety Commission and such other State or interstate agencies (including legislative committees) as he deems appropriate;

(3) consider whether any such proposed standard is reasonable, practicable and appropriate for the particular type of motor vehicle or item of motor vehicle equipment for which it is prescribed; and

(4) consider the extent to which such standards will contribute to carrying out the purposes of this chapter.

#### 15 U.S.C. § 1394

##### § 1394. Judicial review of orders establishing standards; additional evidence before Secretary; certified copy of transcript.

(a)(1) In a case of actual controversy as to the validity of any order under section 1392 of this title, any person who will be adversely affected by such order when it is effective may at any time prior to the sixtieth day after such order is issued file a petition with the United States court of appeals for the circuit wherein such person resides or has his principal place of business, for a judicial review of such order. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Secretary or other officer designated by him for that purpose. The Secretary thereupon shall file in the court the record of the proceedings on which the Secretary based his order, as provided in section 2112 of Title 28.

(a)(4) The judgment of the court affirming or setting aside, in whole or in part, any such order of the Secretary shall be final, subject to review by the Supreme Court of

the United States upon certiorari or certification as provided in section 1254 of Title 28.

#### 15 U.S.C. § 1423

##### § 1423. Uniform quality grading system for motor vehicle tires; elimination of deceptive and confusing tire nomenclature.

In order to assist the consumer to make an informed choice in the purchase of motor vehicle tires, within two years after September 9, 1966, the Secretary shall, through standards established under subchapter I of this chapter, prescribe by order, and publish in the Federal Register, a uniform quality grading system for motor vehicle tires. Such order shall specify the date such system is to take effect which shall not be sooner than one hundred and eighty days or later than one year from the date such order is issued, unless the Secretary finds, for good cause shown, that an earlier or later effective date is in the public interest, and publishes his reasons for such finding. The Secretary shall also cooperate with industry and the Federal Trade Commission to the maximum extent practicable in efforts to eliminate deceptive and confusing tire nomenclature and marketing practices. (Pub. L. 89-563, title II, § 203, Sept. 9, 1966, 80 Stat. 729.)

**APPENDIX F****RULES AND REGULATIONS****NOTE:**

Reprinted here is the preamble to the Regulation, the Uniform Tire Quality Grading Standards, 40 Fed. Reg. 23073. The text of the Regulation itself is reprinted as Appendix A to the Court of Appeals Opinion of September 2, reproduced in Appendix A to this petition.

**Title 49 — Transportation****CHAPTER V — NATIONAL HIGHWAY TRAFFIC  
SAFETY ADMINISTRATION, DEPARTMENT OF  
TRANSPORTATION**

[Docket No. 25; Notice 17]

**PART 575 — CONSUMER INFORMATION  
REGULATIONS****Uniform Tire Quality Grading Standards**

This notice establishes Uniform Tire Quality Grading Standards. The notice is based on proposals published June 14, 1974 (39 FR 20808, Notice 12), August 9, 1974 (39 FR 28644, Notice 14), January 7, 1975 (40 FR 1273, Notice 15). Comments submitted in response to these proposals have been considered in the preparation of this notice.

A rule on this subject was issued on January 4, 1974 (39 FR 1037). It was revoked on May 9, 1974 (39 FR 16469), due to the inability of the NHTSA to obtain from the tire industry "control tires" which were to have been used as the basis for determining the comparative performance grades for treadwear and traction.

The rule issued today requires manufacturers to provide grading information for new passenger car tires in each of the following performance areas: Treadwear, traction, and temperature resistance. The respective grades are to

be molded into or onto the tire sidewall, contained in a label affixed to each tire (except for OEM tires), and provided for examination by prospective purchasers in a form retainable by them at each location where tires are sold.

#### TREADWEAR

Treadwear grades are based on a tire's projected mileage (the distance which it is expected to travel before wearing down to its treadwear indicators) as tested on a single, predetermined test run of approximately 6,400 miles. A tire's treadwear grade is expressed as the percentage which its projected mileage represents of a nominal 30,000 miles, rounded off to the nearest lower 10 percent increment. For example, a tire with a projected mileage of 24,000 would be graded "80", while one with a projected mileage of 40,000 would be graded "130".

The test course has been established by the NHTSA in the vicinity of San Angelo, Texas, as described in Appendix A. It is the same as that discussed at the public briefings on this subject which took place July 23 and July 29, 1974, except that the direction of travel has been reversed on the northwest loop to increase safety by reducing the number of left turns. The course is approximately 400 miles long, and each treadwear test will require 16 circuits. It is anticipated that both the industry, at each manufacturer's option, and the agency will perform treadwear tests on this course; the former for establishing grades, and the latter for purposes of compliance testing, i.e., testing the validity of the grades assigned. To arrange for allocations of test time at the site, industry members should contact the NHTSA facility manager, P.O. Box 6591, Goodfellow Air Force Base, San Angelo, Texas 76901; telephone (915) 655-0546. While manufacturers are not required to test on the site, it would be to their advantage to do so, since the legal standard against which compliance with the rule will be measured is a tire's performance in government tests on that course.

The method of determining projected mileages is essentially that proposed in Notice 12 as modified by Notices 14 and 15 in this docket. The treadwear performance of a candidate tire is measured along with that of course monitoring tires (CMTs) of the same general construction type (bias, bias-belted, or radial) used to monitor changes in course severity. The CMTs are tires procured by the NHTSA — one group each of the three general types — which are made available by the agency for purchase and use by regulated persons at the test site. To obtain course monitoring tires, regulated persons should contact the NHTSA facility manager at the above address.

Each test convoy consists of one car equipped with four CMTs and three or fewer other cars equipped with candidate tires of the same construction type. (Candidate tires on the same axle are identical, but front tires on a test vehicle may differ from rear tires as long as all four are of the same size designation.) After a two-circuit break-in period, the initial tread depth of each tire is determined by averaging the depth measured at six equally spaced locations in each groove. At the end of every two circuits (800 miles), each tire's tread depth is measured again in the same way, the tires are rotated, vehicle positions in the convoy are rotated, and wheel alignments are readjusted if necessary. At the end of the 16-circuit test, each tire's overall wear rate is calculated from the nine measured tread depths and their corresponding mileages-after-break-in as follows: The regression line which "best fits" these data points is determined by applying the method of least squares as described in Appendix C; the wear rate is defined as the absolute value of the slope of the regression line, in mils of tread depth per 1000 miles. This wear rate is adjusted for changes in course severity by a multiplier consisting of the base wear rate for that type of course monitoring tire divided by the measured average of the wear rates for the four CMTs in that convoy. A candidate tire's tread depth after break-in (minus

62 mils to account for wearout when the treadwear indicators are reached) divided by its adjusted wear rate and multiplied by 1000, plus 800 miles, yields its projected mileage. The projected mileage is divided by 30,000 and multiplied by 100 to determine the percentage which, when rounded off, represents the candidate tire's treadwear grade.

A discussion of the NHTSA response to the comments on treadwear grading follows.

*Duration of break-in period and test.* The 400 mile break-in period originally proposed in Notice 12 was extended in Notice 15 to 800 miles, to permit the rotation of each tire between axles after 400 miles. The Rubber Manufacturers Association (RMA) suggested that a 1600-mile break-in, by permitting each tire to be rotated once through each position on the test car, would provide more reliable results. An analysis of variance in a study conducted by the NHTSA showed no significant variations in wear from one side of a car to the other. Further, a review of data from extensive testing on the San Angelo course showed no anomalies or consistent variations in wear rate occurring after the first 800 miles. The NHTSA is convinced that the 800-mile break-in period is sufficient to allow a tire to establish its equilibrium inflated shape and stabilize its wear rate. Therefore, the RMA suggestion has not been adopted.

Many of the comments to Notice 12 suggested that testing distances greater than 6400 miles are necessary for accurate tread life projections. Testing to 40 percent, 50 percent, and even 90 percent of wearout was urged. Unfortunately, only the submission of North American Dunlop was accompanied by substantive data. These data, showing non-linear wear rates, were of questionable validity because the tires were not broken in prior to testing and because the data were collected by different test fleets in different parts of the country. Nonetheless, as a result

of the large number of adverse comments, the NHTSA requested further information from all knowledgeable and concerned parties to document and substantiate the position that a longer treadwear test is necessary. The additional data were requested in a written inquiry to the RMA and in Notice 15. Because of the need to limit test time, test cost, and fuel consumption, the objective was to determine the minimum test distance which can reliably predict ultimate tire treadwear life.

The responses to these requests have been reviewed and analyzed. Again, the NHTSA finds the industry data and conclusions that greater testing distances are necessary lacking in rigor and completeness. In most cases, the conditions of the industry tests were not disclosed or did not coincide with the prescribed control procedures. Serious doubt is cast upon the conclusions because of inadequate information on one or more of the following test conditions: Changes in weather and season, course severity, conformity with prescribed break-in period, mileage between readings, method of projecting mileage, size of convoy, number of tires tested, and uniformity and frequency of tread depth measurement.

A controlled test program recently completed by the NHTSA was designed to test the hypothesis that the rate of wear of tires is constant after an 800-mile break-in. The design and conclusions of the test are discussed in detail in a paper by Brenner, Scheiner, and Kondo ("Uniform Tire Quality Grading; Effect of Status of Wear on Tire Wear," "NHTSA Technical Note T-1014," March, 1975 - General Reference entry No. 42 in this docket.) The general conclusions of the test are: (1) That the inherent rate of wear of tires, after an 800-mile break-in period, is constant and (2) that the projected tread life for a tire estimated from a 6,400-mile test after 800-mile break-in is accurate for all three tire types. Accordingly, the 6,400 mile test period has been retained.

*Grading based on minimum performance.* The RMA expressed strong disagreement with any system in which treadwear grades are based on a tire line's "minimum" projected mileage on the San Angelo test course, urging instead that the average performance of a line is a more appropriate grade. The RMA suggested further that the proposed grading system "ignores the bell-shaped distribution curve which describes any performance characteristic and would require the downgrading of an entire line of tires until no portion of the distribution curve fell below any selected treadwear grade, notwithstanding that the large bulk of a given group of tires was well above the grade."

The NHTSA rejects the arguments and the position taken by the industry on this issue. It is precisely the fact that, in industrial processes involving production of large numbers of items, the products group themselves into the so-called bell-shaped or normal distribution which allows for measurement of central tendency and variation and forms the basis of scientific quality control.

Tests performed by the NHTSA and described in the paper cited above have shown conclusively that different production tires exhibit considerable differences in their variability about their respective average values. Thus, two different tire brands might have identical average values for treadwear, but differ markedly in their variance or standard deviation. These differences would probably be attributable to differences in process and quality control.

Recognition of differences in inherent variability among tire manufacturers and tire lines is of the utmost importance to the consumer. The average or mean measure of a group of tires does not provide sufficient information to enable the consumer to make an informed choice. If one tire on a user's car wears out in 10,000 miles, the fact that the "average" tire of that type wears to 25,000 miles in the same driving environment does not alter his need to purchase a new tire. Ideally, the consumer might be

provided with more information if he were given a measure of the mean (central tendency) and standard deviation (variability) for each tire type, but the complexity and possible confusion generated by such a system would negate its advantages. In the NHTSA's judgment, the most valuable single grade for the consumer is one corresponding to a level of performance which he can be reasonably certain is exceeded by the universe population for that tire brand and line.

As with the other consumer information regulations issued by this agency, a grade represents a minimum performance figure to which every tire is expected to conform if tested by the government under the procedures set forth in the rule. Thus, any manufacturer in doubt about the performance capabilities of a line of his tires is free to assign a lower grade than what might actually be achieved, and he is expected to ensure that substantially all the tires marked with a particular grade are capable of achieving it.

*Homogeneity of course monitoring tires.* Another aspect of the Notice 12 proposal which generated much controversy is the adoption by the NHTSA of production tires for use as course monitoring tires. The commenters suggested that changes in course severity be monitored instead by tires manufactured under rigidly specified conditions to ensure homogeneity. Because variations in the performance of course monitoring tires are reflected in treadwear projections for all candidate tires, it follows that the more homogeneous the universe of the monitoring tires, the more precisely the performance of the candidate tires can be graded. The NHTSA is in complete accord with the industry's desire to minimize the variability of tires chosen for course monitoring. The development of specifications for special "control tires", in which materials, processing, and other conditions are rigidly controlled to a degree beyond that possible for mass production, will continue. The NHTSA hopes to work with the tire industry to reduce the variability of course monitoring tires to the maximum

extent possible. However, it should be noted that an earlier version of this regulation had to be revoked due to the difficulty in obtaining such "control tires." Recent tests (summarized in the paper cited above) demonstrate that implementation of a viable treadwear grading system need not be delayed further, pending development of special tires. In these tests, the current radial CMTs — Goodyear Custom Steelgards chosen from a single, short production run — show a coefficient of variation (standard deviation of wear rate divided by mean) of 4.9 percent. This degree of uniformity is commensurate with universally accepted criteria for test control purposes. Hence, grading of radial tires may be started immediately. The tentatively adopted bias and bias-belted CMTs showed coefficients of variation of 7.3 percent and 12.4 percent, respectively. Existing test data indicate that the NHTSA will be able to identify and procure other tires of these two construction types, exhibiting homogeneity comparable to the current radial CMTs, in time for testing in accordance with the implementation schedule set out below. In any event, the variability of course monitoring tires will be taken into account by the NHTSA in connection with its compliance testing. At worst, the degree of grading imprecision associated with CMT variability will be no greater than one-half the levels measured for the current bias and bias-belted tire lots, because the standard deviation for the average of a set of four tires is equal to one-half that of the universe standard deviation. It is the NHTSA's judgment that treadwear grades of this level of precision will provide substantially more meaningful information to the prospective tire buyer than is currently available.

To make efficient use of the available CMTs, the NHTSA expects to conduct treadwear tests with used CMTs, as well as with new ones. This will not affect any mileage projections, because the inherent wear rate of tires is constant after break-in. Test results will be discarded if the treadwear indicators are showing on any of the CMTs at the end of a test.

*The need for three separate course monitoring tires.* Many commenters suggested that a single CMT of the bias-ply type be used, arguing that the use of a different CMT for each general construction type would create three separate treadwear rating systems. These suggestions appear to result from a misunderstanding of the role of the course monitoring tires. They are not used as yardsticks against which candidate tires are graded. Instead, they are used to monitor changes in the severity of the test course. Experiments performed by the NHTSA (Brenner, F. C. and Kondo, A., "Elements in the Road Evaluation of Tire Wear", "Tire Science and Technology," Vol. 1, No. 1, February 1973, p. 17 — General Reference entry No. 17 in this docket) show that changes in test course severity will affect tires of differing construction types to differing degrees. For example, the improvement in projected tread life from the severest to the mildest test courses in the experiments was 12 percent for bias tires, yet it was 91 percent for bias-belted tires and 140 percent for radial tires. In fact, a variety of factors influence course severity, each having different relative effects on the various tire types. Therefore, the use of a single course monitoring tire on courses of varying severity, or even on a given course whose severity is subject to variation due to weather and road wear, would not permit the correct adjustment of measured wear rates for environmental influences. Only with a CMT for each construction type can a single, uniform treadwear grading system be established.

*Expression of treadwear grades.* The system of treadwear grading proposed in Notice 12 specified six grades, as follows:

- Grade X (projected mileage less than 15,000)
- Grade 15 (projected mileage at least 15,000)
- Grade 25 (projected mileage at least 25,000)
- Grade 35 (projected mileage at least 35,000)
- Grade 45 (projected mileage at least 45,000)
- Grade 60 (projected mileage at least 60,000)

Among the objections to this proposal was that small differences in actual treadwear in the vicinity of grade boundaries would be misrepresented as large differences because of the breadth of the predetermined categories. The NHTSA was also concerned that the broad categories could in some cases reduce the desirable competitive impact of the treadwear grading system if tires of substantially differing treadwear performance were grouped in the same grade. For these reasons, a relatively continuous grading system was proposed in Notice 15, in which tires would be graded with two digit numbers representing their minimum projected mileages in thousands of miles as determined on the San Angelo test course. The major objection to both of these proposals was that grades expressing projected mileages would lead consumers to expect every tire to yield its indicated mileage. The manufacturers were especially concerned that this would subject them to implied warranty obligations, despite the disclaimer on the label. The NHTSA remains convinced that treadwear grades which are directly related to projected mileages are the most appropriate way of expressing treadwear performance. To overcome any possible misinterpretation by consumers, the grading system established today is changed from that of Notice 15 to indicate relative performance on a percentage basis, as described above. This decision is based in part upon the fact that testing performed to date on the San Angelo course has given projected mileages that are generally higher than those the average user will obtain i.e., it appears to be a relatively mild course.

*Wheel alignment procedure.* Test vehicle wheel alignment procedures received considerable comment. Notice 12 proposed alignment to vehicle manufacturer's specifications after vehicle loading. Notice 15 proposed that this be done before loading, and that the measurements taken after loading be used as a basis for setting alignment for the duration of the test. The majority of the commenters strongly favored a return to the original procedure. The NHTSA takes particular cognizance of the fact that those

commenters who have actually tried both procedures in testing at San Angelo find the procedure of Notice 12 to be satisfactory and practicable, and that of Notice 15 to be unusable. NHTSA representatives at San Angelo have reported satisfactory operation on a variety of vehicles using the originally proposed procedure, and have not observed any uneven tire wear that would indicate alignment problems. For these reasons, the final rule prescribes alignment procedures which are identical with those proposed in Notice 12.

*Tire rotation procedure.* Several commenters objected to using the proposed "X" rotation procedure for testing radial tires. The NHTSA is aware that this procedure differs from that recommended by many groups for consumers' use. While some vehicle and tire manufacturers recommend that radial tires be rotated only fore-aft, others recommend no rotation at all and yet others are silent on the subject. The primary reason for these other methods appears to be to improve passenger comfort by reducing vibration. No data have been submitted, however, to suggest that the proposed method has any adverse or uneven effect on radial tire wear. Further, this method has the advantage, for treadwear testing, of balancing out any side-to-side or axle wear differences attributable to the vehicle or to the course. Accordingly, the proposed tire rotation method has been adopted without change.

*Choice of grooves to be measured.* Some commenters suggested that treadwear projections be calculated from measurements of the most worn grooves on candidate tires, rather than from the averages of measurements made in all grooves. It was argued that, because many States require replacement of passenger car tires when treadwear indicators appear in any two adjacent grooves, the proposed method of calculation would yield misleadingly high projections. Analysis of projections based on both methods (Brenner, F. C. and Kondo, A., "Patterns of Tread Wear and Estimated Tread Life," "Tire Science and Technology," Vol. 2, No. 1, 1973—General Reference entry no. 27

in this docket) shows a high correlation between the resulting tire rankings. Because the treadwear grading system established today is based on relative performance, there is no disadvantage in adopting the proposed method. On a related issue, the E.T.R.T.O. pointed out that some grooves near the tire shoulder which are designed only for esthetic reasons exhibit practically no wear, and suggested that measurements be made only in those grooves which contain treadwear indicators. This suggestion has been adopted.

*Calculation of projected mileage.* Several methods for calculating the tire wear rates to be used in determining projected mileages were considered. Notice 12 proposed calculating the geometric mean of the wear rates measured for each 800-mile increment. This approach was rejected because the geometric mean is extremely sensitive to inaccurate readings in any single measurement. Use of the arithmetic mean of the incremental wear rates appears to be the general industry practice. Unfortunately, however, the intermediate readings have no effect on such a calculation, because the result is a function only of the initial tread depth (after break-in) and that measured 6,400 miles later. Therefore, a wear rate calculated by the industry method is extremely sensitive to errors in these two measurements. In Notice 15, the NHTSA proposed that wear rate be calculated by the least-squares regression method, as described above. This approach has the advantage of weighting all measurements and minimizing the effect of inaccurate readings, so it has been adopted.

*Differing tires on a single test vehicle.* Uniroyal and the E.T.R.T.O. argued that each test convoy vehicle should be equipped with four identical tires; the reason given was that otherwise, the performance of a candidate tire would be a function of the tires chosen by the NHTSA for use on the other axle of the test vehicle during compliance testing. The NHTSA is unaware of any data that support this position. The rule adopted today requires that all vehicles in a single convoy be equipped with tires of the same gen-

eral construction type, and that all tires on a single vehicle be of the same size designation. In extensive testing at San Angelo with this procedure, none of the suggested undesirable variations has been observed.

*Differing test vehicles in a single convoy.* Several commenters suggested that the rule specify that all vehicles in a given convoy be identical, to reduce variations in projected treadlife. The NHTSA is in complete agreement with the premise that those variables which can be identified and which can affect treadwear results should be controlled as closely as is feasible. Variations in vehicle type, however, do not appear to produce significant variations in treadwear projections. Nevertheless, to minimize such variations, tires will be tested for compliance only on vehicles for which they are available as original equipment or recommended replacement options. Where practical, all vehicles in a given convoy will be of the same make. However, to test tires designed for the range of wheel sizes available, the suggested method would require a proliferation of course monitoring tires, one for each combination of wheel size and construction type. Therefore, the suggestion has not been adopted.

*Accuracy of tread depth measurements.* The RMA suggested that the interval between measurements be increased to 1,600 miles to reduce the effects of measurement error. However, if this interval were used instead of 800 miles, only five readings would be obtained in the 6,400 mile treadwear test, so errors in any one reading would result in a greater overall error. A recently completed study (Kondo, A. and Brenner, F. C., "Report on Round-Robin Groove Depth Measuring Experiment," "NHTSA Technical Note T-1012," March 1975—General Reference entry No. 44 in this docket) shows that variations among measurements of the same tread depth by different operators do not present a serious problem. The study found that the only significant variations in measurement results occur as a result of differences in measuring techniques between different laboratories. Since these

techniques are consistent within a given laboratory, the different laboratories arrive at the same results in terms of the slope of the tread depth regression line that is the basis of the treadwear grade.

#### TRACTION

Traction grades are based on a tire's traction coefficient as measured on two wet skid pads, one of asphalt and one of concrete. Because a method for producing identical skid test surfaces at different sites has not yet been developed, the NHTSA has established two skid pads, described in Appendix B, near the treadwear test course in San Angelo. These pads represent typical highway surfaces. The asphalt surface has a traction coefficient, when tested wet using the American Society for Testing and Materials (ASTM) E 501 tire, of  $0.50 \pm 0.10$ . The concrete surface was described in Notice 12 as having a traction coefficient, when similarly tested, of  $0.47 \pm 0.05$ . Due to surface polishing, this coefficient has declined and stabilized at  $0.35 \pm 0.10$ . As with the treadwear course, these pads are available for use by manufacturers as well as the agency. For allocations of test time, industry members should contact the NHTSA facility manager at the above address.

Before each candidate tire test, the traction coefficient of each surface is measured with two ASTM tires to monitor variations in the surface, using a two-wheeled test trailer built in accordance with ASTM Method E-274-70. The candidate tire's traction coefficient is similarly measured on each surface, and then adjusted by adding a fixed coefficient (0.50 for asphalt, 0.35 for concrete) and subtracting the average coefficient obtained from measurements with the two ASTM tires.

The tire industry's major objection to the proposed rule was that, with four possible grades for traction, two tires might be graded differently without a meaningful difference in their performance. The RMA suggested a scheme with two grade categories above a minimum requirement. The rule issued today, by setting two threshold levels of

performance, establishes three grades: "O", for performance below the first threshold; "•", for performance above the first threshold; and "••", for performance above the second threshold. The NHTSA is convinced that the grades thus defined reflect significant differences in traction performance.

Firestone suggested that further testing may demonstrate that only one pad is necessary to give the best and most consistently repeatable results. However, the ranking of a group of tires based on their performance on one surface can differ from their ranking on another surface. In fact, one tire manufacturer suggested that an additional surface of low coefficient be included in the testing scheme for this reason. The NHTSA agrees that an additional surface may increase the utility of the traction grading system, and anticipates a proposal to implement this suggestion in the future.

The suggestion of Pirelli, that measurements be made during the period between 0.5 and 1.5 seconds after wheel lockup instead of the period between 0.2 and 1.2 seconds, has been adopted. To permit more efficient use of the skid pads, the rule specifies a test sequence which differs slightly from that originally proposed: "Instead of being tested repeatedly on the asphalt pad and then repeatedly on the concrete pad, each tire is run alternately over the two pads. A change in paragraph (f)(2)(i)(A) permits tires to be conditioned on the test trailer as an alternative to conditioning on a passenger car. Another change facilitates the use of trailers with instrumentation on only one side, which had been inadvertently precluded by the wording of the proposed rule.

#### TEMPERATURE RESISTANCE

The major objection to the proposed high speed performance grading scheme was that it was neither necessary nor beneficial to the consumer. Several commenters pointed out that Standard No. 109 specifies testing a tire against a laboratory wheel at a speed corresponding to 85

mph, and argued that certification of a tire to this minimum requirement provides the consumer with adequate information about its performance at all expected driving speeds. They suggested that only one higher grade be established, for tires designed to be used on emergency vehicles. Some commenters indicated that, as proposed, the rule seemed to condone or even encourage the unsafe operation of motor vehicles above legal speed limits. To preclude this misinterpretation, the third tire characteristic to be graded has been renamed "temperature resistance". The grade is indicative of the running temperature of the tire. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. Therefore, the distinctions provided by three grades of temperature resistance are meaningful to the consumer. Except for the name change, this aspect of quality grading has been adopted as proposed. A grade of "C" corresponds to the minimum requirements of Standard No. 109. "B" indicates completion of the 500 rpm test stage specified in paragraph (g)(9), while "A" indicates completion of the 575 rpm test stage.

#### PROVISION OF GRADING INFORMATION

Several commenters objected to the proposed tread label requirement, suggesting that point-of-sale material such as posters and leaflets could provide the consumer with adequate information about tire grades. For the reasons discussed in Notice 12, the NHTSA is convinced that labels affixed to the tread of the tire are the only satisfactory method of providing complete information to replacement tire purchasers. Therefore, the scheme of transmitting quality grading information to consumers, combining sidewall molding, tread labels, and point-of-sale materials, has been adopted substantially as proposed. A change in paragraph (d)(1)(ii) clarifies the respective duties of vehicle manufacturers and tire manufacturers to provide information for prospective purchasers.

Several vehicle manufacturers requested that new vehicles not be required to be equipped with graded tires until six months after the date that tires must be graded. These commenters appear to have misunderstood the scope of the quality grading standard. The NHTSA expects that tires which comply with the standard will appear on new vehicles as inventories of ungraded tires are depleted. Part 575.6 requires of the vehicle manufacturer only that he provide the specified information to purchasers and prospective purchasers when he equips a vehicle with one or more tires manufactured after the applicable effective date of this rule.

The NHTSA has determined that an Inflationary Impact Statement is not required pursuant to Executive Order 11821. Industry cost estimates and an inflation impact review are filed in public Docket No. 25. This review includes an evaluation of the expected cost of the rule.

In consideration of the foregoing, a new § 575.104, "Uniform Tire Quality Grading Standards" is added to 49 CFR Part 575, to read as set forth below.

*Effective dates.* For all requirements other than the molding requirement of paragraph (d)(1)(i)(A): January 1, 1976, for radial ply tires; July 1, 1976, for bias-belted tires; January 1, 1977, for bias ply tires. For paragraph (d)(1)(i)(A): July 1, 1976, for radial ply tires; January 1, 1977, for bias-belted tires; July 1, 1977, for bias-ply tires.

(Secs. 103, 112, 119, 201, 203; Pub. L. 89-563, 80 Stat. 718; 15 U.S.C. 1392, 1401, 1407, 1421, 1423; delegation of authority at 49 CFR 1.51.)

Issued on May 20, 1975.

JAMES B. GREGORY,  
Administrator.

#### NOTE:

The text of the Regulation, 49 C.F.R. § 575.104, is reprinted as Appendix A to the Court of Appeals Opinion of September 2, reproduced in Appendix A to this petition.